e-Writer User's Guide

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How to use this guide

Chapter 1 “Introduction to e-Writer and Installation” introduces the installation of the writer (e-Writer) and the programming software (HOPE3000). When you use e-Writer for the first time, you need to read this chapter carefully to set up the programming environment well **(On the aspect of the hardware configuration, it’s especially to note that the setting of 4P Jumper [or 4P DIP Switch] on the back of the writer must be correct).**

And then if you wish to use e-Writer right away, please referring to the commonly used cases on Chapter 2 “Quick Start”, and you can easily achieve any programming purpose by the steps in these cases.

On the following Chapter 3 “Introduction to HOPE3000 Main Function” and Chapter 4 “Introduction to HOPE3000 – Smart Programming Function”, these introduces completely the detail, like interface, function and other notes, of HOPE3000. If you wish to understand the full functions of HOPE3000, you can read these chapters carefully.

Except using HOPE3000 by Windows UI, you can also operate e-Writer by command method on the program “Command Prompt” under MS Windows. Chapter 5 “Introduction to HOPE3000 – DOS Command Mode” introduces how to use this function completely.

Finally, Appendix A “System and Error Message” lists all the error messages appeared when you use HOPE3000, also explanations of these messages and basic error detect methods to these errores; Appendix B “e-Writer LED Lights and Status” explains the definition of these lights on e-Writer. And you can refer to these parts when you need

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Chapter 1

Introduction to e-Writer and Installation 1

e-Writer is the writer designed for programming Holtek all-series MCU. You can use e-Writer to write program and data to all OTP/Flash MCU designed by HOLTEK SEMICONDUCTOR INC. The feature of e-Writer is small, light, handy and as small in size as your palm. Installing e-Writer is very easy, and its function is easy to use.

e-Writer supports the On-Line Programming Mode that needs to connect with PC and the Off-Line Programming Mode that no needs to connect with PC. On the Off-Line Mode, after downloading programming data to e-Writer by HOPE3000 on PC, you can operate e-Writer without the connection with PC；On the On-Line Mode, you need to use USB cable to connect with PC and e-Writer, then operating e-Writer by HOPE3000.

Because Holtek supplies many kinds of different packages of MCU, the corresponding programming adapters are supplied for programming each kind of package of MCU. Therefore, you need to use the correct programming adapter to plug into e-Writer

Installation

System Requirement

When you use e-Writer, you need the following devices and systems:

- Power Adapter, its output voltage is 5V and output current is at least 500mA. You had better use the power adapter supplied by OEM (Holtek)
- Correct Programming Adapter
- Personal Computer (PC) with USB port (for On-Line Mode)
- MS Windows 2000/XP or compatible window operating system (for On-Line Mode)
- HOPE3000 software (for On-Line Mode)

Note：Programming Adapter is consumables, we suggest you to maintain and update regularly

Hardware Installation

Connect e-Writer and USB port on PC with USB cable (Fig. 1-1), and **check if the 4P Jumper (4P DIP Switch) on the back of e-Writer is set up correctly (please refer to the table 1-1 in the section "Hardware Configuration" of this chapter. This setting will affect the result of programming, and you must confirm it before using it)**

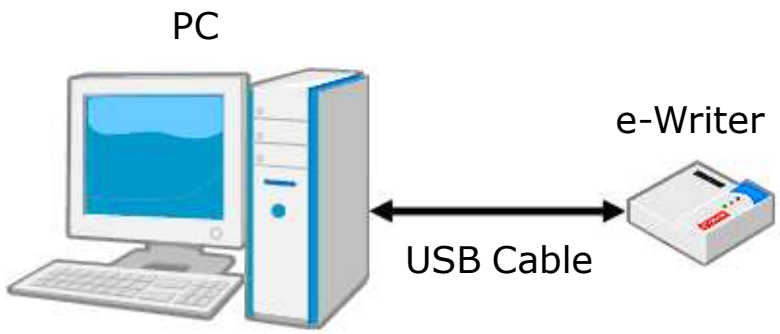


Fig. 1-1

Software Installation

- Step 1
  Execute HOPE3000 installing program "HOPE3000V100Build20090125Install.EXE" (the version and release date of your software may be different from this, please using the last one)

- Step 2
  Installation Welcome Window (Fig. 1-2). Please click the button "Next"

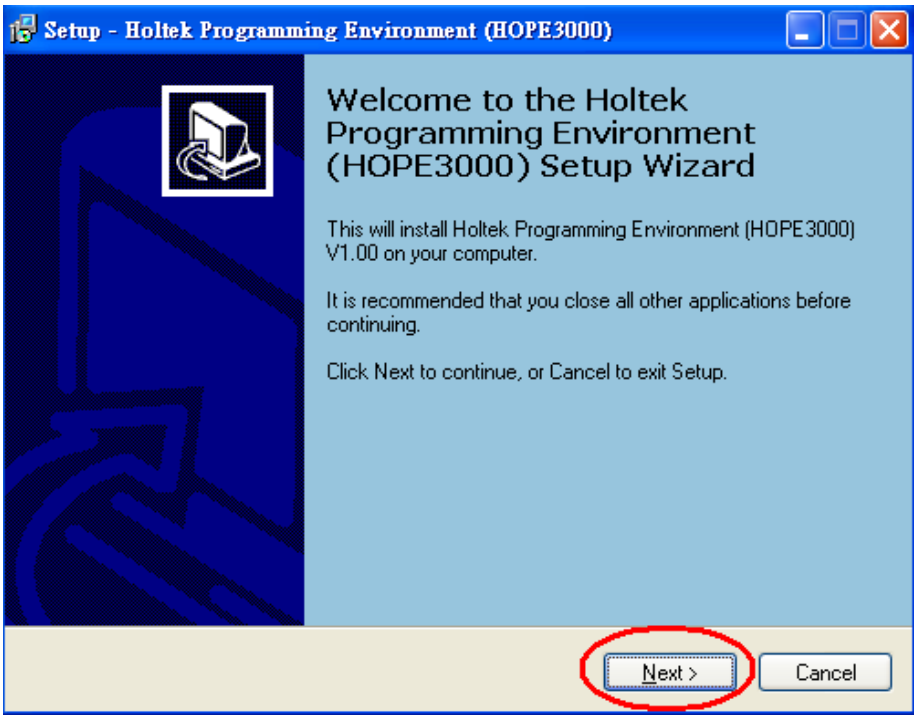

Setup - Holtek Programming Environment (HOPE3000)
Welcome to the Holtek Programming Environment (HOPE3000) Setup Wizard
This will install Holtek Programming Environment (HOPE3000) V1.00 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

Fig 1-2

• Step 3

Specify the path of HOPE3000 (Fig. 1-3). We suggest to use the default path, then click the button "Next"

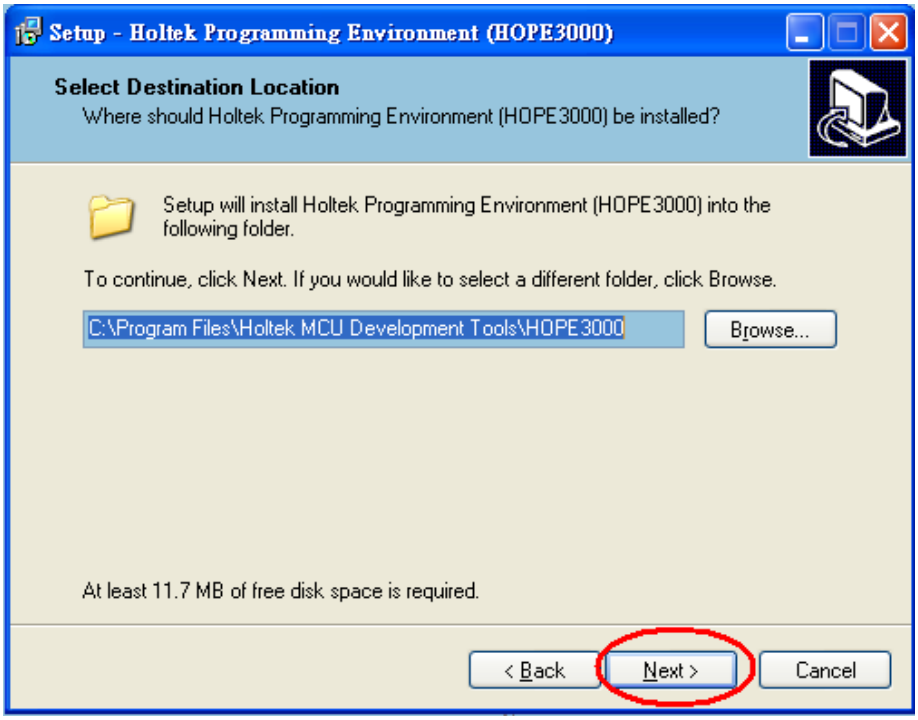

Setup - Holtek Programming Environment (HOPE3000)
Select Destination Location
Where should Holtek Programming Environment (HOPE3000) be installed?
Setup will install Holtek Programming Environment (HOPE3000) into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files\Holtek MCU Development Tools\HOPE3000
Browse...
At least 11.7 MB of free disk space is required.
< Back
Next >
Cancel

Fig. 1-3

• Step 4

Specify the path of the shortcut on Program Files (Fig. 1-4). We suggest to use the default path, then click the button “Next”

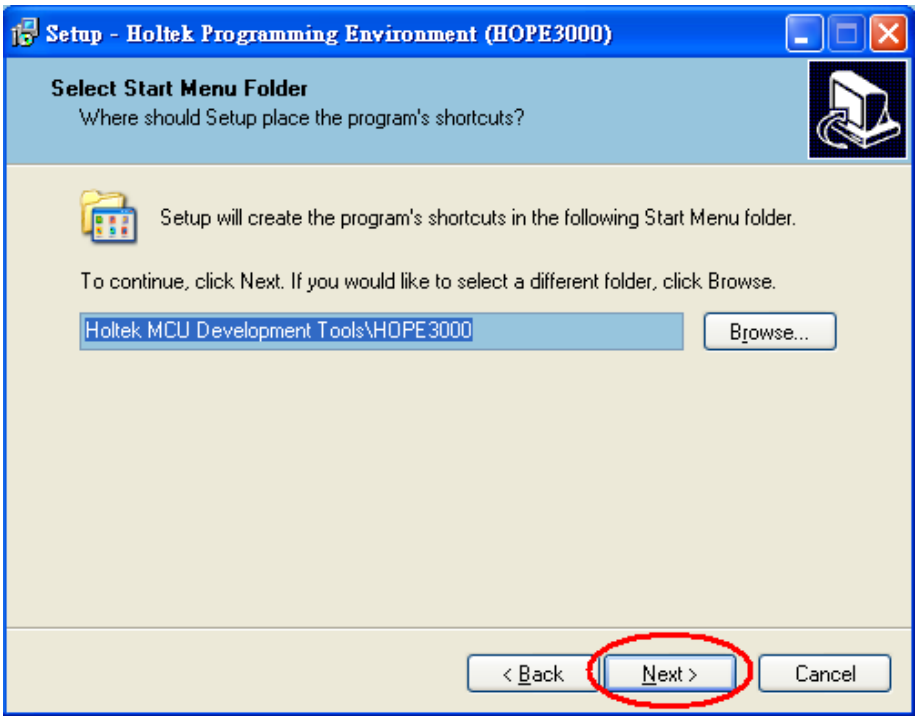

Setup - Holtek Programming Environment (HOPE3000)
Select Start Menu Folder
Where should Setup place the program's shortcuts?
Setup will create the program's shortcuts in the following Start Menu folder.
To continue, click Next. If you would like to select a different folder, click Browse.
Holtek MCU Development Tools\HOPE3000
Browse...
< Back
Next >
Cancel

Fig. 1-4

• Step 5

Check the option to generate a shortcut on Desktop (Fig. 1-5). Then click the button “Next”

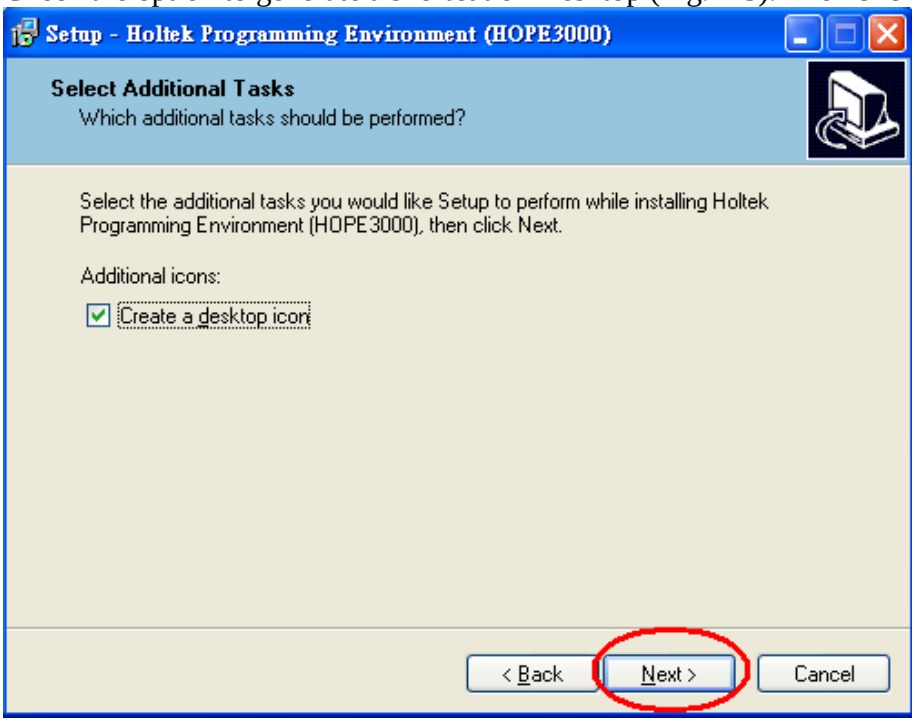

Setup - Holtek Programming Environment (HOPE3000)
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing Holtek Programming Environment (HOPE3000), then click Next.
Additional icons:
Create a desktop icon
< Back
Next >
Cancel

Fig. 1-5

• Step 6

Check the detail of installation, then click the button “Install” to start to install (Fig. 1-6)

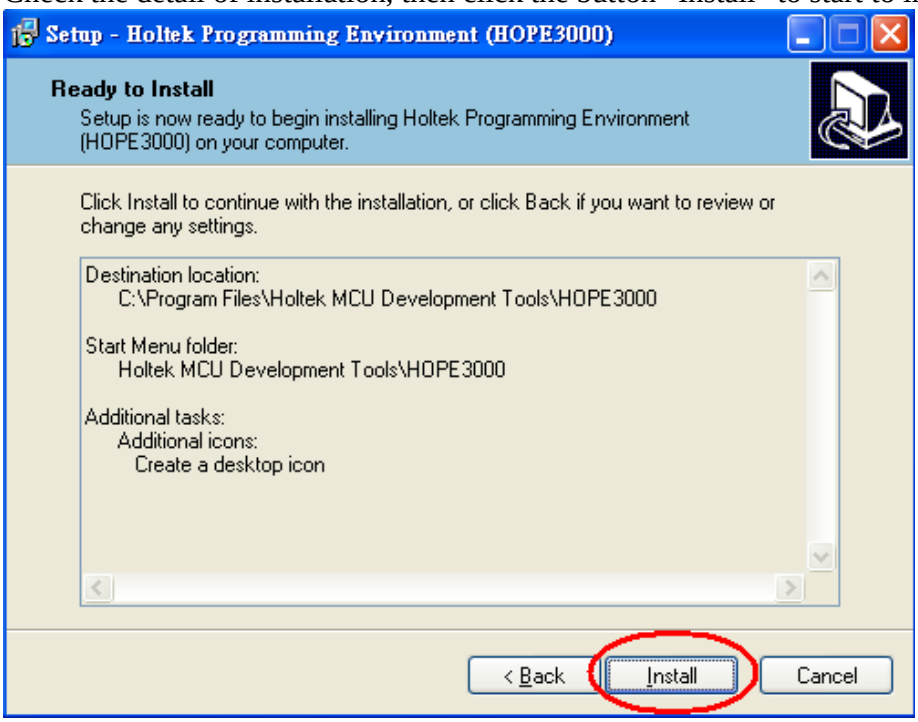

Setup - Holtek Programming Environment (HOPE3000)
Ready to Install
Setup is now ready to begin installing Holtek Programming Environment (HOPE3000) on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
C:\Program Files\Holtek MCU Development Tools\HOPE3000
Start Menu folder:
Holtek MCU Development Tools\HOPE3000
Additional tasks:
Additional icons:
Create a desktop icon
< Back
Install
Cancel

Fig. 1-6

• Step 7

Finish installation. Click the button “Finish” to exit installing program (Fig. 1-7)

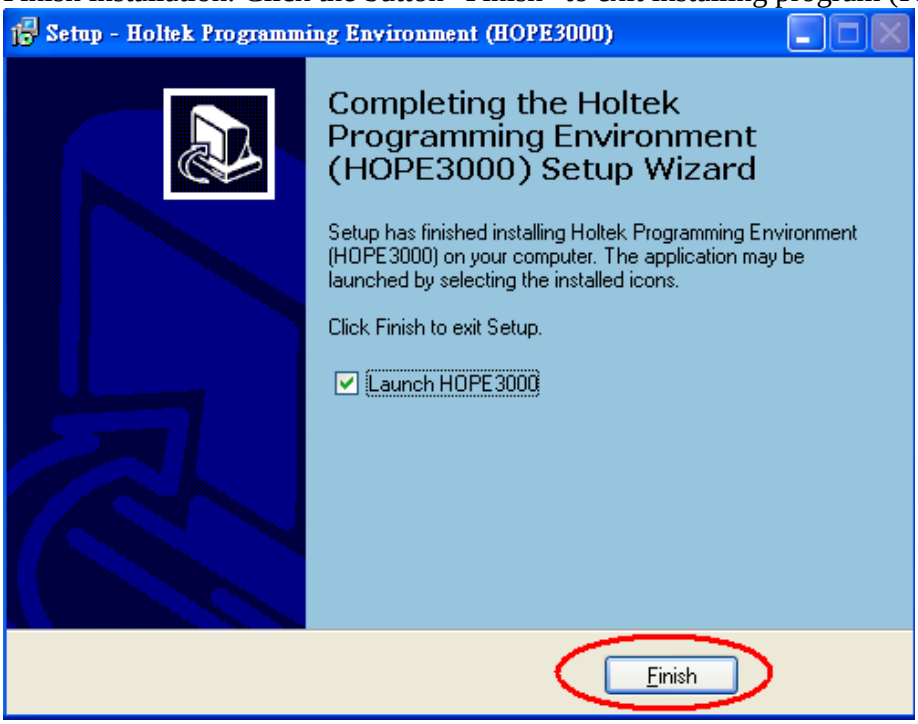

Setup - Holtek Programming Environment (HOPE3000)
Completing the Holtek Programming Environment (HOPE3000) Setup Wizard
Setup has finished installing Holtek Programming Environment (HOPE3000) on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Launch HOPE3000
Finish

Fig. 1-7

Hardware Configuration

The name of each part of the e-Writer hardware is shown on Fig. 1-8, and table 1-1 explains each item of this figure.

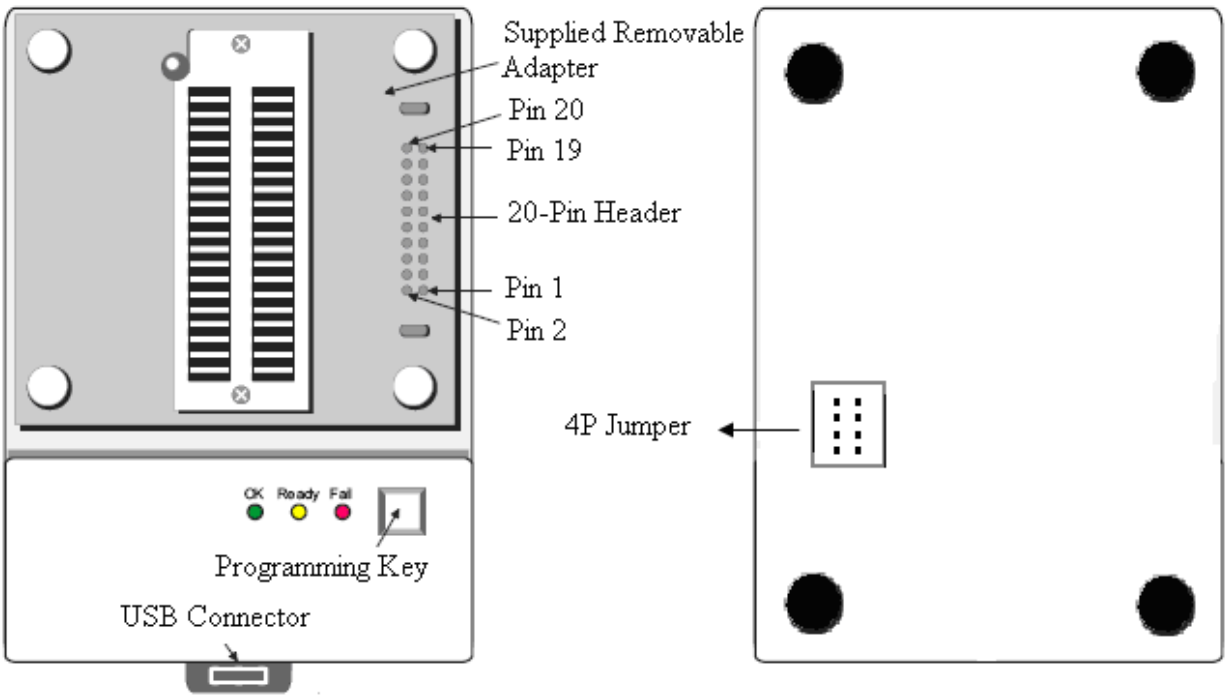


Fig. 1-8

※Note: The back 4P Jumper of some old version of e-Writer is replaced by 4P DIP Switch, like Fig. 1-9

Fig. 1-9

Item	Explanation
Supplied Removable Adapter	Programming Adapter. There are different adapters by different IC type and packages
20-Pin Header	Programming Pins
OK	Green LED, light for normal state
Ready/Busy	Yellow LED, light for ready/busy state
Fail	Read LED, for light for fail state
Programming Key	Programming Key on Off-Line Mode
USB Connector	USB Connector for connecting with PC
4P Jumper (DIP Switch)	Operating Jumper (Switch) on the back **□Please see the Note 1**

※ Note 1: When 4P Jumper (or 4P DIP Switch) are all short (Switch are ON), it represent to program Flash Type Voice OTP MCU (like HT83F, HT95RH series), but

keeping open (Switch are OFF) for other OTP/Flash MCU series. Because incorrect setting will result in programming fail, you must make sure if 4P Jumper (or 4P DIP Switch) is set correctly before using e-Writer

Table 1-1

Programming pin and its corresponding pin to the 20-Pin Header is listed on the following Table 1-2:

Programming Pin	Pin of 20 Pin Header	Remark
AD0	8	
AD1	6	
AD2	4	
AD3	2	
CLK	10	
CSB	12	
RWB	14	
SCL	3	
SDA	5	
VDD	18	
VPP	20	
SCK	9	Note 1
SDI	11	Note 2
SDO	13	Note 3
CEB	15	Note 4
Ground (direct connection)	16，17，19	

Note 1: The Jumper 4 on 4P Jumper: Short = SCK, Open = Ground (direct connection)
(The DIP 4 on 4P DIP Switch: ON = SCK , OFF = Ground (direct connection))
Note 2: The Jumper 3 on 4P Jumper: Short = SDI, Open = Ground (direct connection)
(The DIP 3 on 4P DIP Switch: ON = SDI , OFF = Ground (direct connection))
Note 3: The Jumper 2 on 4P Jumper: Short = SDO , OFF = Ground (direct connection)
(The DIP 2 on 4P DIP Switch: ON = SDO , OFF = Ground (direct connection))
Note 4: The Jumper 1 on 4P Jumper: Short = CEB, OFF = Ground (direct connection)
(The DIP 1 on 4P DIP Switch: ON = CEB, OFF = Ground (direct connection))

Table 1-2

Chapter 2

Quick Start 2

Preparation before Programming

Before programming MCU, you need to use the function of the “Build” on the Project menu of HT-IDE3000 to generate a MCU-programming file (.OTP/.MTP/.PND), and after that, you can use e-Writer and HOPE3000 to program MCU. About the detail of HT-IDE3000, you can refer to the “HT-IDE3000 User’s Guide”.

Now connecting e-Writer to PC, executing HOPE3000 program, and following the steps in the below programming cases, then you can finish programming easily.

Case. 1 – How to Program a MCU

If you wish to program a MCU-programming file (.OTP/.MTP/.PND) to MCU on PC, please following the below steps:

- Step 1

Execute the command on HOPE3000: Menu/File/Open (Fig. 2-1)

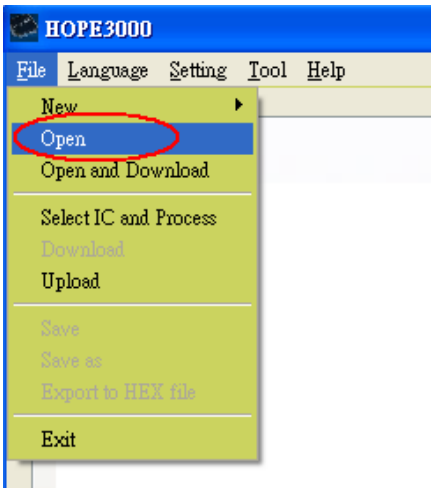


Fig. 2-1

- Step 2

Such as in Fig. 2-2, select the file type (OTP, MTP or PND) firstly (Action 1), then select the file to open (Action 2), and finally click the button “Open” (Action 3)

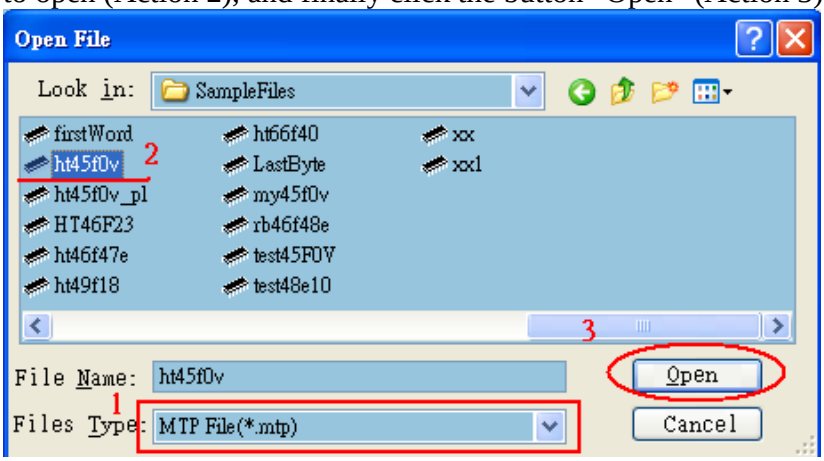


Fig. 2-2

- Step 3

Then download the opened file to e-Writer (Menu\File\Download), as in Fig. 2-3

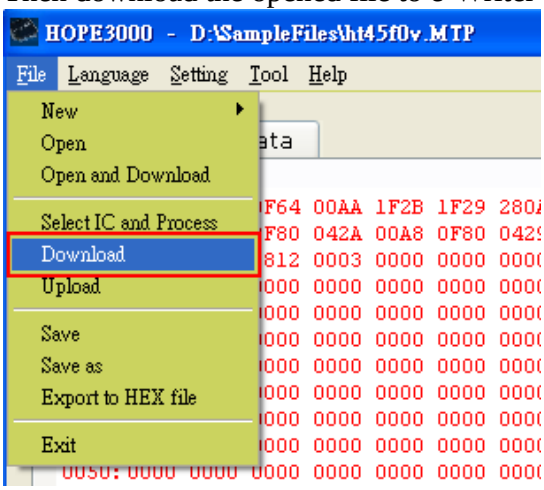


Fig. 2-3

- Step 4

After downloading, if it is successful so far, the bottom message box will display “Complete and OK” (Fig. 2-4). Then you can start to program: click the buttons “BlankCheck”, “Program”, “Verify”, “Lock IC” (if you wish to lock IC) in Fig. 2-4 consequently to finish programming. In addition, you can clear the data in Flash MCU by clicking the button “Erase”.

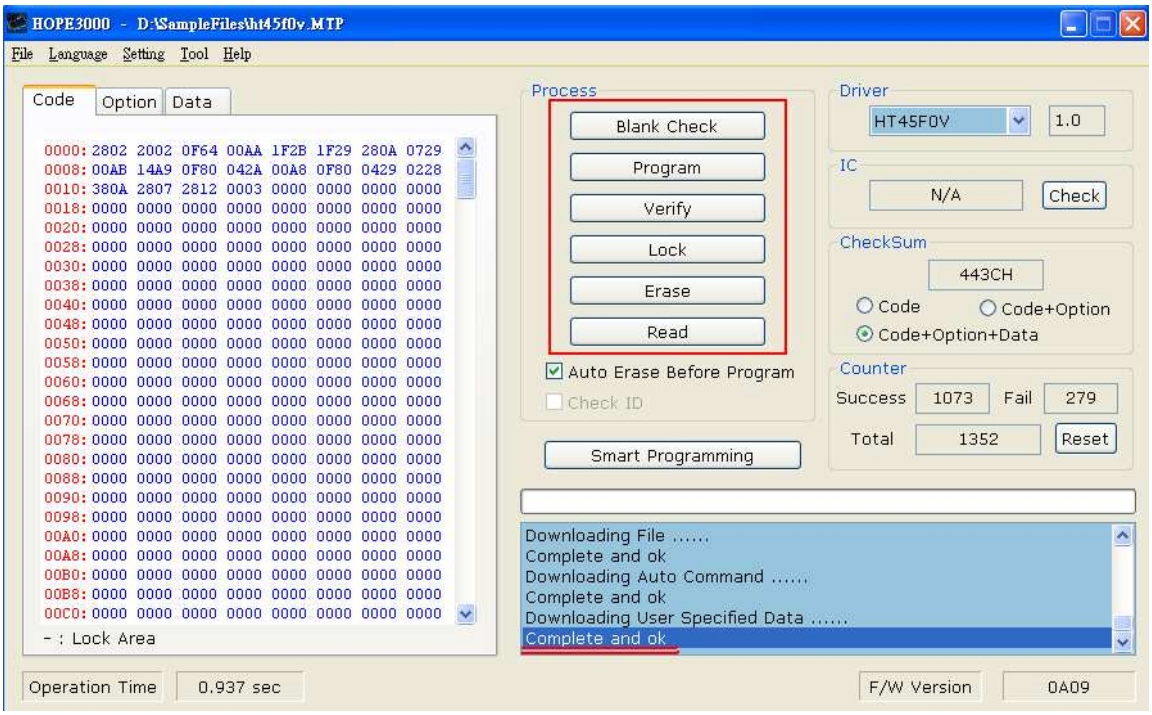


Fig. 2-4

If any problem about UI detail, please refer to Chapter 3 “Introduction to HOPE3000 Main Function”; if error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

Case. 2 – How to Do Auto Programming

Case. 1 is to realize programming on PC, but you still need to click the buttons “BlankCheck”, “Program”, “Verify” ...etc to finish programming. Now there introducing a method that after only setting one time on HOPE3000, you can finish above depicted programming operations by only clicking the button “Auto” one time. It’s suitable for amount programming works, and the operating steps are listed as following:

- Step 1 ~ 3

The same as the step 1 ~ 3 in Case. 1

- Step 4

Click the button “Smart Program” in below Fig. 2-5. Then Smart Programming UI is shown as in Fig. 2-6

- Step 5

On Smart Programming UI (Fig. 2-6), select the demand programming operations (repeat the Action 1 and 2), and then download these settings to e-Writer (Action 3)

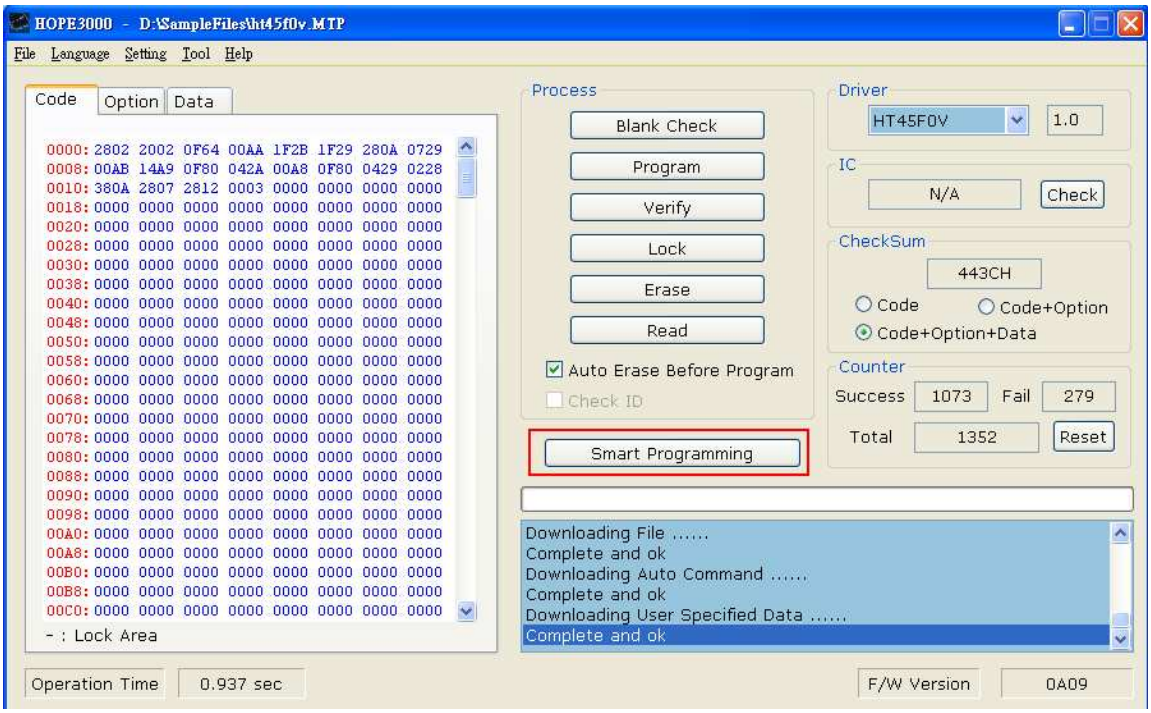

HOPE3000 - D:\SampleFiles\ht45f0v.MTP
File Language Setting Tool Help
Code Option Data
0000: 2802 2002 0F64 00AA 1F2B 1F29 280A 0729
0008: 00AB 14A9 0F80 042A 00A8 0F80 0429 0228
0010: 380A 2807 2812 0003 0000 0000 0000 0000
- : Lock Area
Process
Blank Check
Program
Verify
Lock
Erase
Read
Auto Erase Before Program
Check ID
Smart Programming
Driver
HT45F0V
1.0
IC
N/A
Check
CheckSum
443CH
Code
Code+Option
Code+Option+Data
Counter
Success 1073
Fail 279
Total 1352
Reset
Downloading File .....
Complete and ok
Downloading Auto Command .....
Complete and ok
Downloading User Specified Data .....
Complete and ok
Operation Time 0.937 sec
F/W Version 0A09

Fig. 2-5

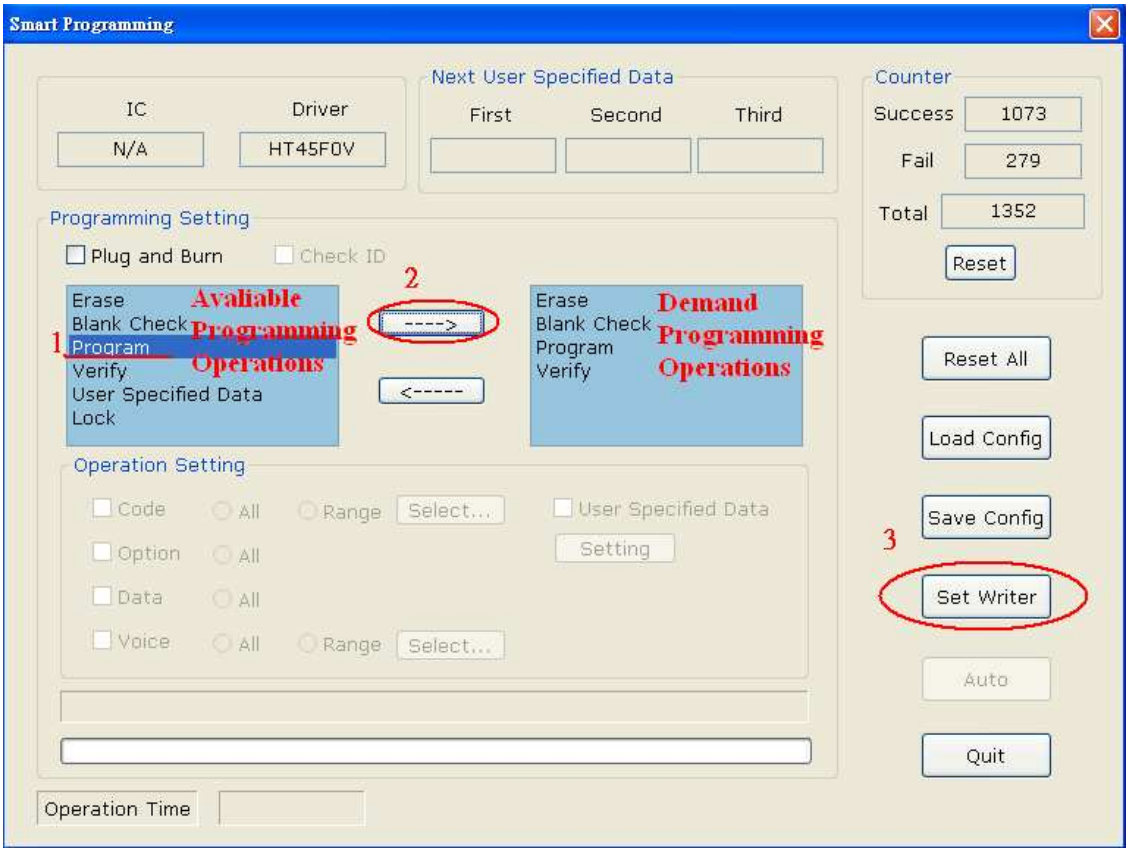

Smart Programming
IC
N/A
Driver
HT45F0V
Next User Specified Data
First
Second
Third
Counter
Success 1073
Fail 279
Total 1352
Reset
Programming Setting
Plug and Burn
Check ID
1
Erase
Blank Check
Program
Verify
User Specified Data
Lock
Avaliable Programming Operations
2
---->
<-----
Erase
Blank Check
Program
Verify
Demand Programming Operations
Operation Setting
Code All Range Select...
Option All
Data All
Voice All Range Select...
User Specified Data
Setting
Reset All
Load Config
Save Config
3
Set Writer
Auto
Quit
Operation Time

Fig. 2-6

- Step 6

If download is success, the button “Auto” on the bottom right corner of the above Fig. 2-6 will be enabled. Then clicking this button, it will execute all the selected programming operations (execute one time for clicking one time)

If any problem about UI detail, please refer to Chapter 3 “Introduction to HOPE3000 Main Function” or Chapter 4 “Introduction to HOPE3000 – Smart Programming Function”; if any error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

Case. 3 – How to Program the Partial of IC

Some application will have the demand of programming IC for multiple times, namely, programming the partial data for each time. Below steps show you how to program the partial data:

- Step 1 ~ 4

The same as the step 1~4 on Case. 2.

- Step 5

Then set the programming range, as in below Fig. 2-7. At first, select the operation “Program” from “Available Programming Operations” List (Action 1), then click the button “---->” (Action 2), and the operation “Program” will appear on “Demand Programming Operation” List.
Then click this operation and the Section “Operation Setting” on the bottom will be enabled. Select the partial of “Code” in this section (Action 4), and finally click the button of “Select...” (Action5) to pop up the window as in Fig. 2-8 for further range setting

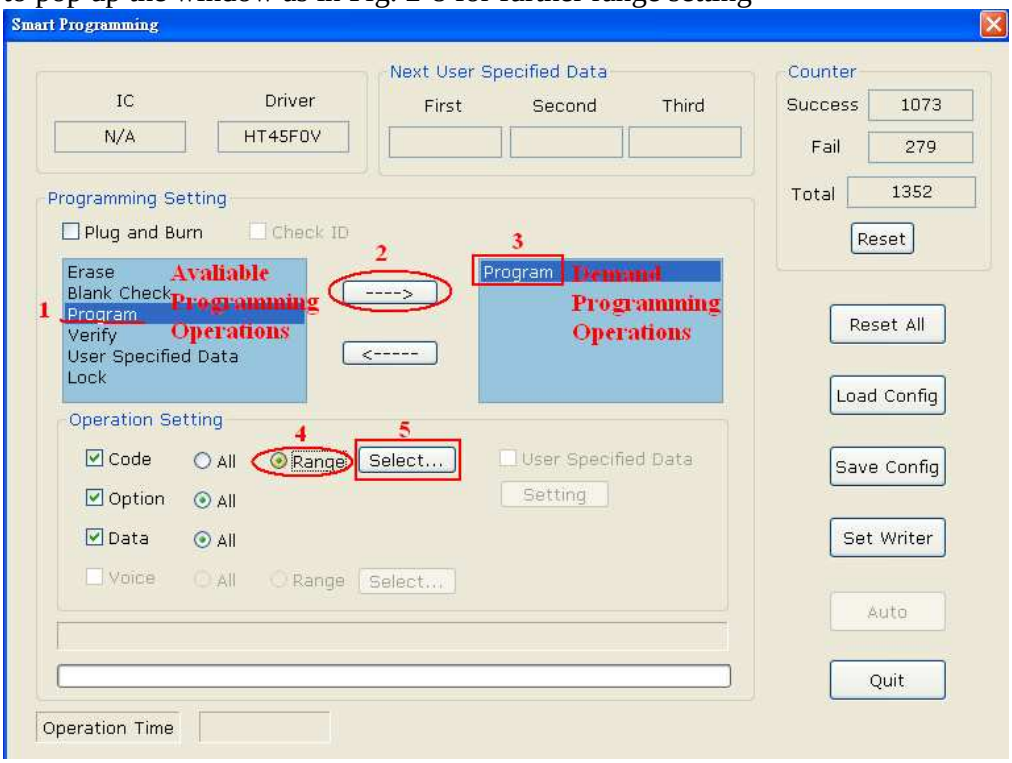


Fig. 2-7

- Step 6

Select the “Map” mode on the below Fig. 2-8 (Action 1) and the ROM range selection section is shown on the window left. Then click the button “Add Select” (Action 2), specify programming range (Action 3) and finally click the button “OK” (Action 4) to store these settings and quit this window

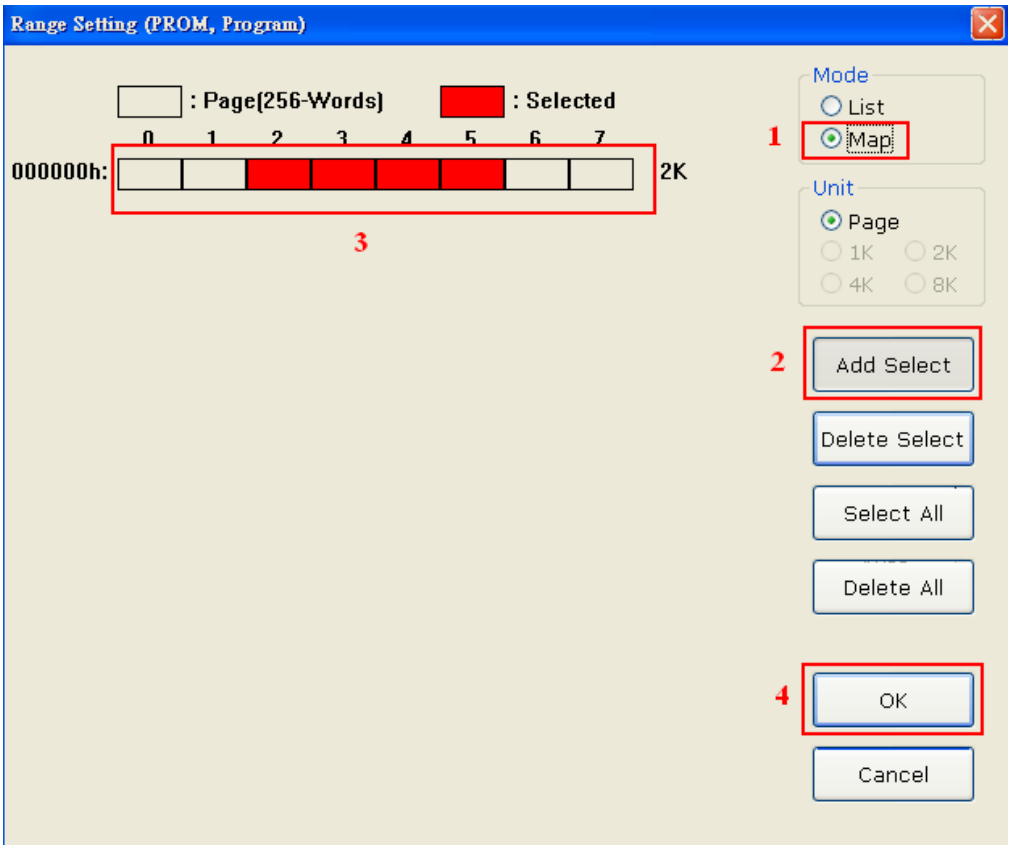


Fig. 2-8

- Step 7

Repeat the steps 5~6 to add the programming operations “Erase”, “BlankCheck”, “Verify” or “Lock IC”, such as in Fig. 2-9. After that, download these settings to e-Writer (Action 1), if success, the button “Auto” will be enabled and then click this button to execute the specified operations (Action 2). And thereafter, you can finish one time of programming by only clicking the button “Auto” one time.

If any problem about UI detail, please refer to Chapter 3 “Introduction to HOPE3000 Main Function” or Chapter 4 “Introduction to HOPE3000 – Smart Programming Function”; if any error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

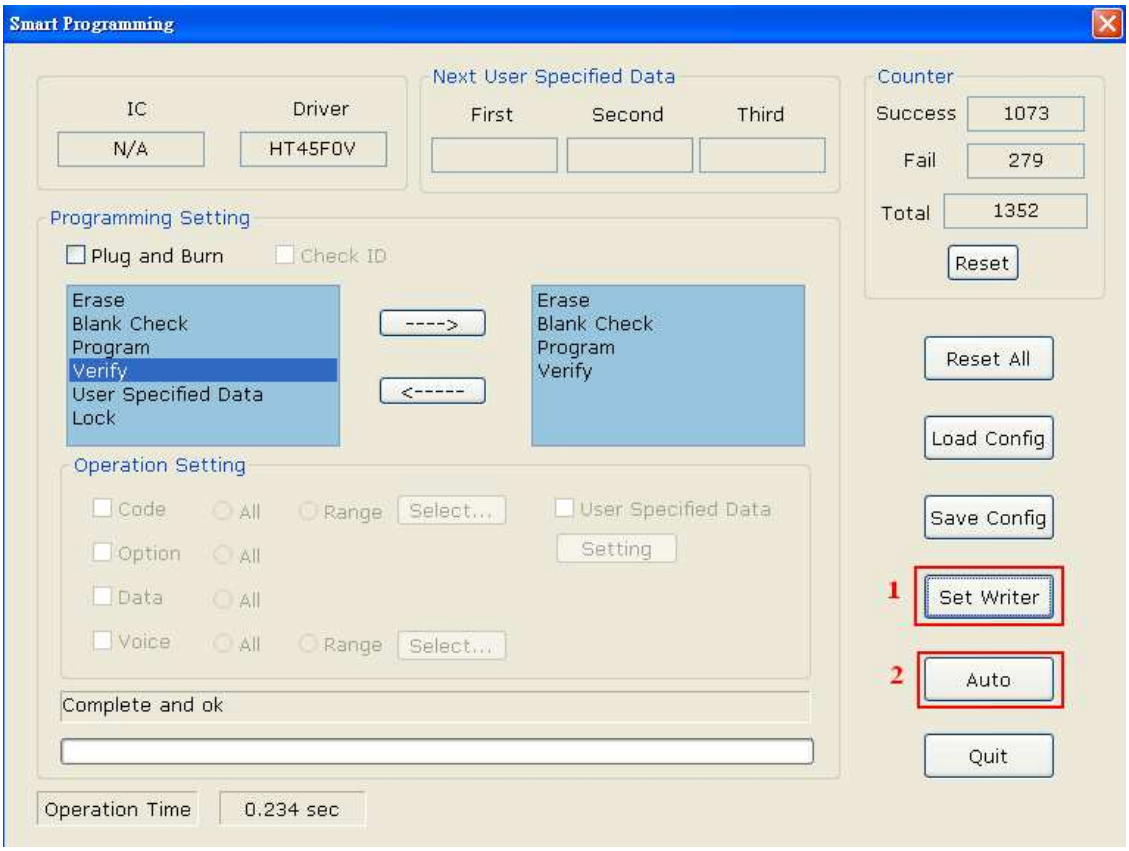


Fig. 2-9

Case. 4 – How to Program the Serial Number or Other Specified Data

If you wish to program serial number or other data to Program ROM, you can use the function "User Specified Data" on Smart Programming. Following steps introduce how to use this function:

- Step 1~4

The same as Step 1~4 in Case. 2

- Step 5

As Action 1~3 in Fig. 2-10, add operation "User Specified Data" to "Demand Programming Operation" List. Then click the button "Setting" in Section "Operation Setting", and User Specified Setting Window will be shown as in Fig. 2-11

- Step 6

Set the detail of the specified data. Fig. 2-11 demonstrates the setting for programming a data on the address 100H of Program ROM in IC. The data are generated by the mathematical expression "N+1" and the initial value of N is 22 (namely, it's 22 for the first-programmed IC, 33 for the second one, ...etc). After Action 1~3, click the button "OK" to store these settings and quit this window

For other detail in Fig. 2-11, please refer to Section “User Specified Data Setting Window” on Chapter 4 “Introduction to HOPE3000 Smart Programming Function”

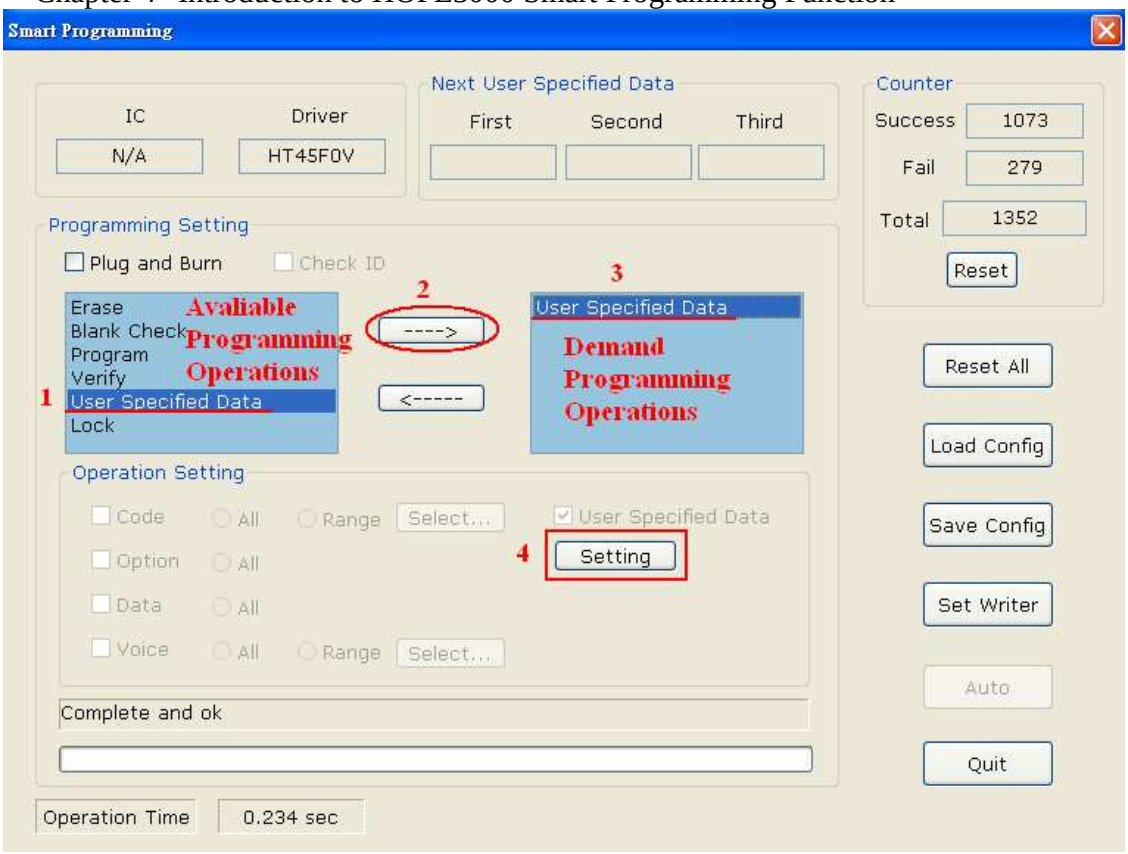


Fig. 2-10

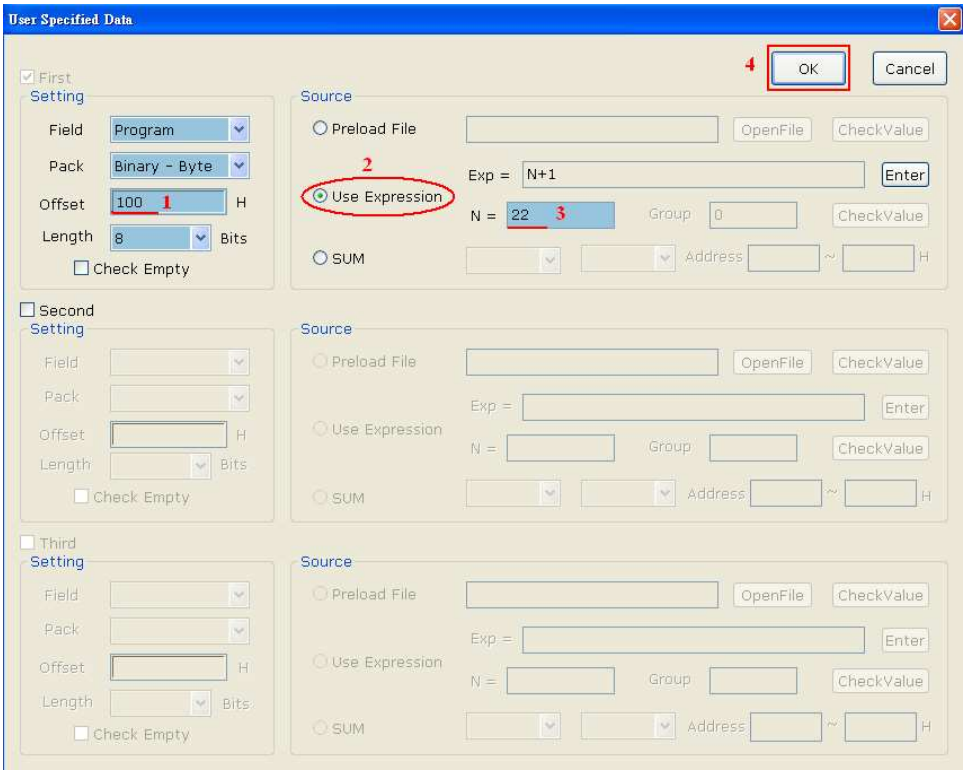


Fig. 2-11

- Step 7

Download these settings to e-Writer as Action 1 in Fig. 2-12. After that, the first record of data to program is shown on Rectangle 2. Then click the button “Auto” (Action 3) to program, programming one record per one-clicking. After each programming, the record of next data to program will be shown on Rectangle 2

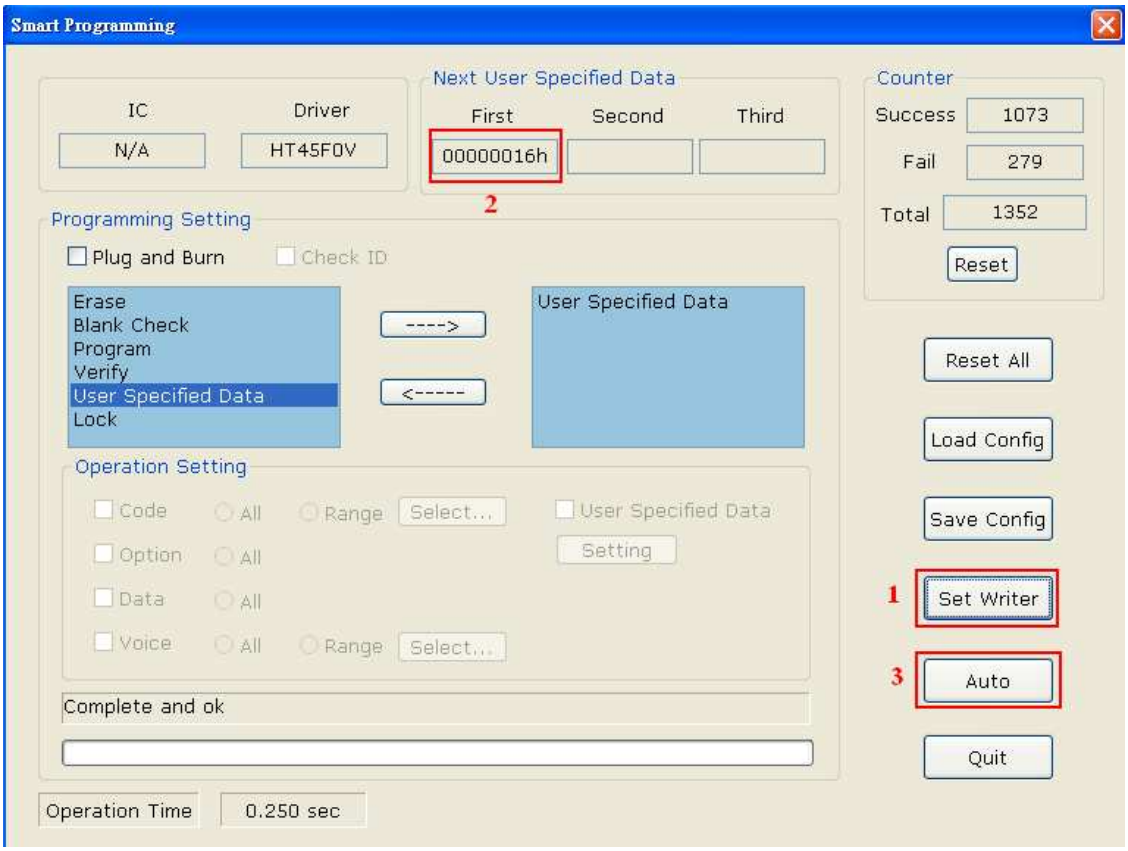


Fig. 2-12

In Addition, When you set partial programming in Case. 3, you can also set the user specified data at the same time.

If any problem about UI detail, please refer to Chapter 3 “Introduction to HOPE3000 Main Function” or Chapter 4 “Introduction to HOPE3000 – Smart Programming Function”; if any error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

Case. 5 – How to Do Standalone Programming (Off-Line Mode)

If you wish to do standalone programming (operate e-Writer without connecting it to PC), firstly you need to connect e-Writer to PC and download the programming file and operations to e-Writer, then pressing the programming key on e-Writer to program. The detail is as following:

- Step 1~5

Download the programming file and operations to e-Writer, as Step 1~5 in Case 2

- Step 6

Exit HOPE3000, and remove the USB connector on e-Writer

- Step 7

Plug the USB connector of the 5V power adapter to e-Writer and turn on the power. At the moment, e-Writer checks if the downloaded data on Step 1~5 is correct, if ok, e-Writer is be on Ready State (the yellow LED light is turned on); otherwise, it is on Fail State (the red LED light is turned on), and you need to download data to e-Writer again (repeat Steps 1~5)

Note: you can't continue to next step until the yellow LED light is turned on (Ready light)

- Step 8

Put the IC in the programming adapter (this IC type must be the same as the MCU type of the programming file downloaded on Step 1~5) and press the Programming Key (the Programming Key in Fig. 1-8) on e-Writer to program

- Step 9

Examine the LED lights for checking if the programming is success (the green LED light flashes slowly and other two lights are turned off)

If any problem about UI detail, please refer to Chapter 3 "Introduction to HOPE3000 Main Function" or Chapter 4 "Introduction to HOPE3000 – Smart Programming Function"; if any error occurred during programming, please refer to Appendix A "System and Error Message" for further explanation; if any problem about the LED lights on e-Writer, please refer to Appendix B "e-Writer LED Lights and Status".

Case. 6 – How to Read Data from IC (Without a Programming File)

Generally, before reading data from IC, you need to open the programming file for that IC type or the data in e-Writer is for that IC type. Now introducing a method that when you has no any programming file for this IC type or the data in e-Writer isn't for this IC type, you can still read data from IC by HOPE3000. the detail is listed as following:

- Step 1

Execute the command "Menu/File/Select IC and Operate", as in Fig. 2-13

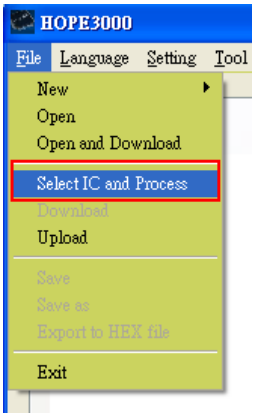


Fig. 2-13

- Step 2

Then the dialog “IC Select” is popped up. Select the demand IC type from Section “From All IC” (as in Fig. 2-14), and click the button “OK” to quit this window

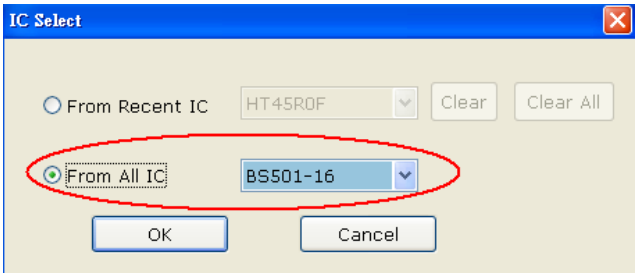


Fig. 2-14

- Step 3

Then HOPE3000 will download the driver for that IC type to e-Writer, if success, parts of the buttons in Section “Process” will be enabled as in Fig. 2-15. At the moment, you can click the button “Read” to read data from IC directly, and after that, execute the command “Menu/File/ Upload” to upload and show data on HOPE3000.

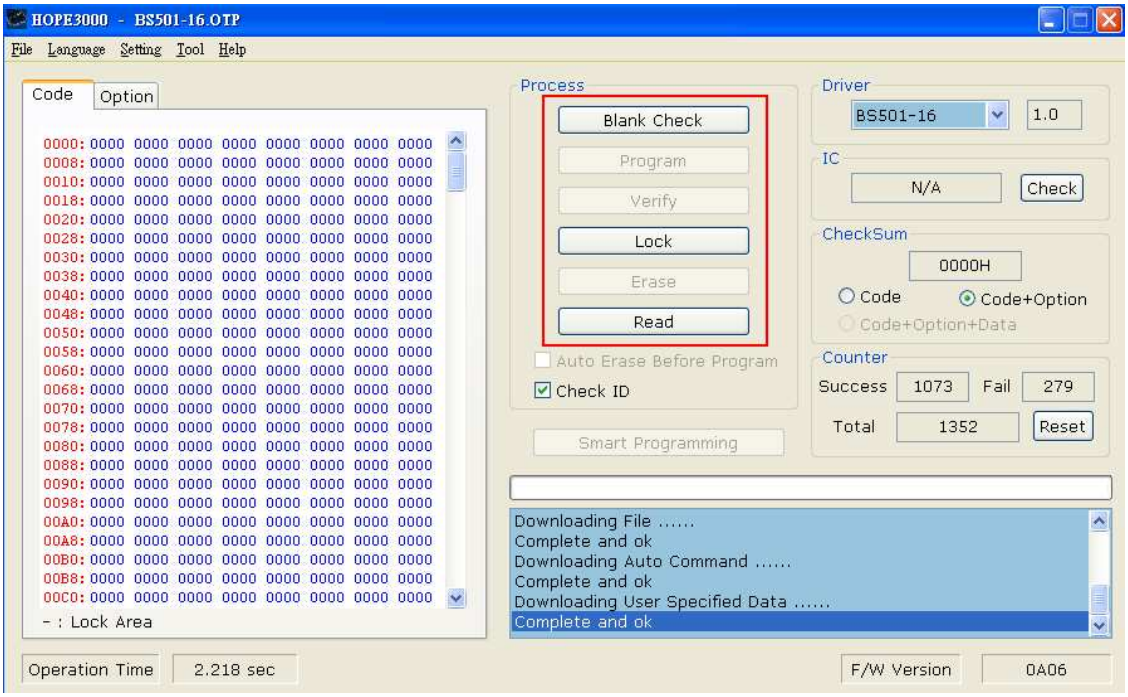


Fig. 2-15

If any problem about UI detail, please refer to Chapter 3 “Introduction to HOPE3000 Main Function”; if any error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

Case. 7 – How to Execute the Programming Operations by Command Method

HOPE3000 supports command mode (DOS Command Mode). The way to start it is as following:

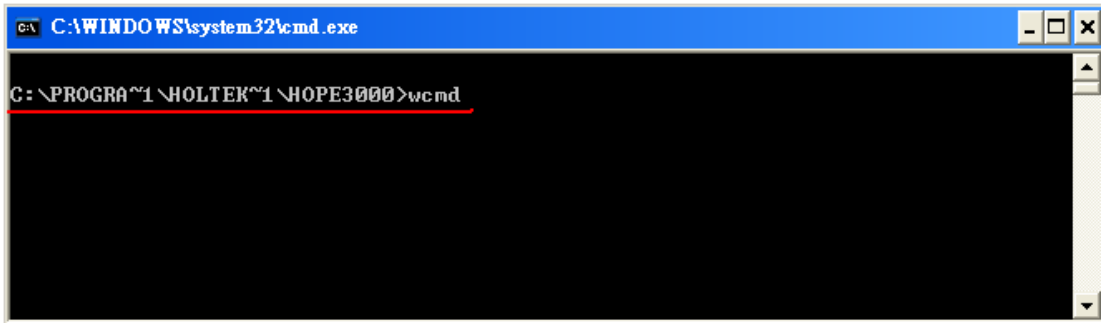
- Step 1

Exit HOPE3000 program and execute the program “Command Prompt” under Microsoft Windows

Note: HOPE3000 and DOS Command Mode program can’t be executed at the same time, or it will affect the result of programming.

- Step 2

On Command Prompt, switch the current path to the directory of HOPE3000 (the path specified on Step 3 in Section “Software Installation” of Chapter 1) and then type the execution file name of “DOS Command Mode”, WCMD.EXE (as in Fig. 2-16).



Fgire 2-16

- Step 3

Now the usage of “DOS Command Mode” is shown (as the rectangle in Fig. 2-17), then type the command by this usage.

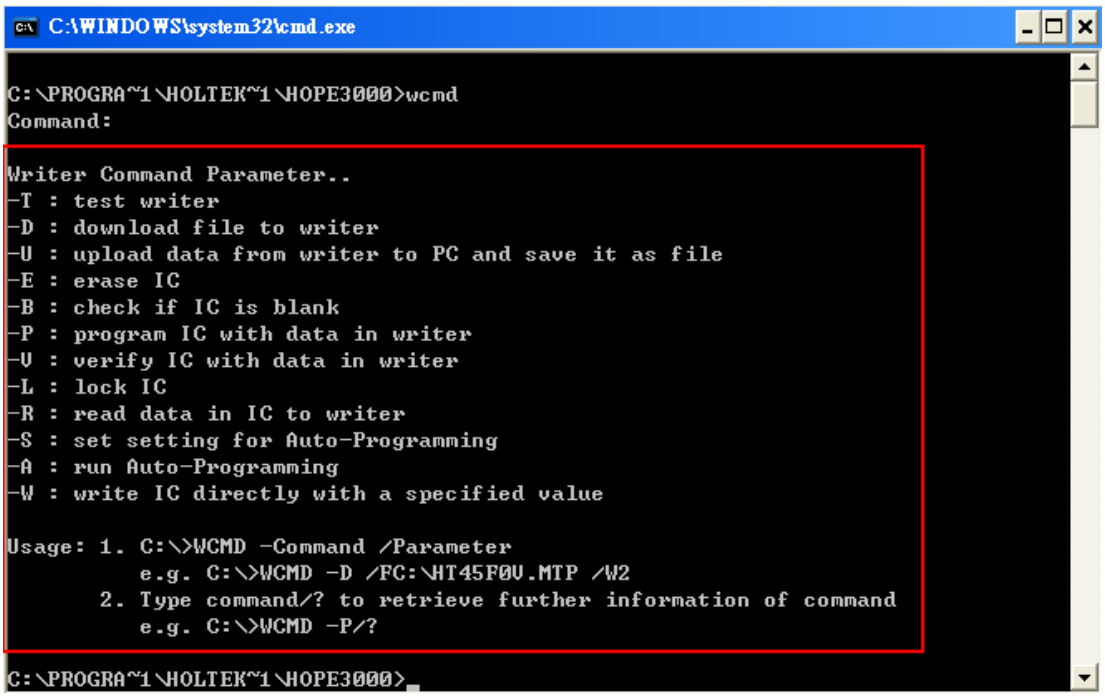

C:\WINDOWS\system32\cmd.exe
C:\PROGRA~1\HOLTEK~1\HOPE3000>wcmd
Command:
Writer Command Parameter..
-T : test writer
-D : download file to writer
-U : upload data from writer to PC and save it as file
-E : erase IC
-B : check if IC is blank
-P : program IC with data in writer
-V : verify IC with data in writer
-L : lock IC
-R : read data in IC to writer
-S : set setting for Auto-Programming
-A : run Auto-Programming
-W : write IC directly with a specified value
Usage: 1. C:\>WCMD -Command /Parameter
e.g. C:\>WCMD -D /FC:\HT45F0V.MTP /W2
2. Type command/? to retrieve further information of command
e.g. C:\>WCMD -P/?
C:\PROGRA~1\HOLTEK~1\HOPE3000>

Fig. 2-17

If any problem about the detail for “DOS Command Mode”, please refer to Chapter 5 “Introduction to HOPE3000 – DOS Command Mode”; if any error occurred during programming, please refer to Appendix A “System and Error Message” for further explanation.

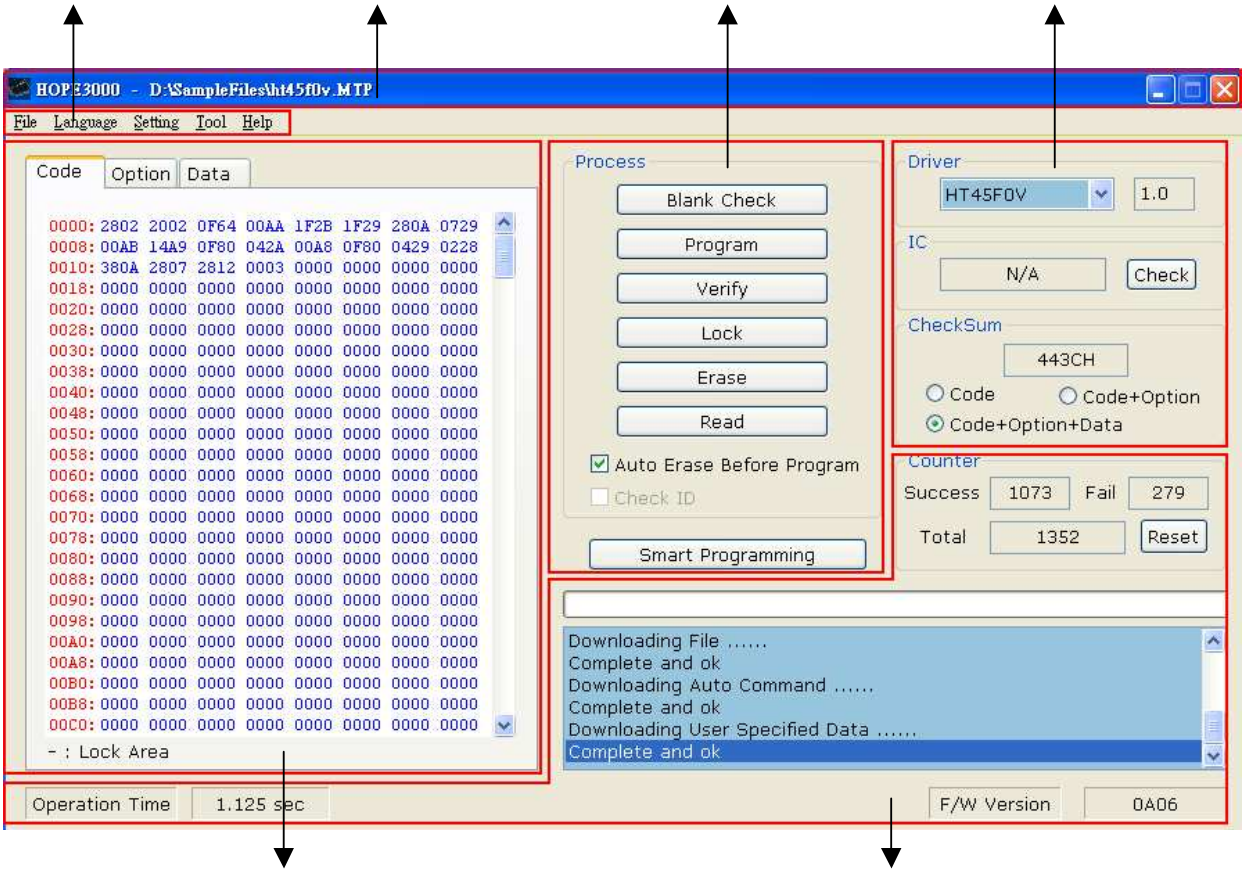
Chapter 3

Introduction to HOPE3000 Main Function

3

The main task of the HOPE3000 Main UI is to handle the operations to program entire IC. This UI is divided into six sections and the following introduces the detail of these sections.

Section Menu	Section Title and System Menu	Section Programming Operations and Smart Programming	Section IC Information



Section
ROM Data

Section
Message Box and
Other Information

Fig. 3-1

Section Menu

File Menu

(Fig. 3-2 shows the commands of the File Menu)

- Open
  Open the programming file. After executing this command, program switches its UI to proper one by file type. Now it supports the following file types:
  OTP (OTP MCU)
  MTP (Flash MCU)
  PND (Flash Type Voice OTP MCU)
- Open and Download
  Open the programming file and download it to e-Writer.
- Select IC and Process
  By this command, be able to do the operations “BlankCheck”, “Lock IC”, “Erase” or “Read”

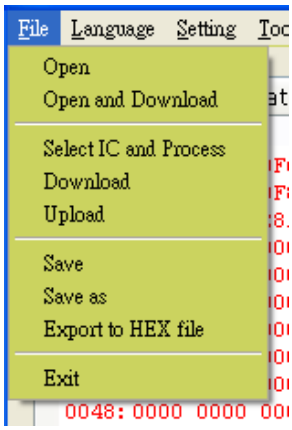


Fig. 3-2

by only selecting the demand IC type without opening any programming file firstly. After executing this command, a dialog “Select IC” is popped up, as in Fig 3-12. About the detail of this dialog, refer to the section “Select IC Dialog” of “Other Functiion” on this chapter.

- Download
  Download the opened programming file to e-Writer.
- Upload
  Upload the data in e-Writer (include the programming file) to HOPE3000 program. After uploading, program prompts you to save it.
- Save
  Save the data on HOPE3000 UI as a file (it will replace the original file).
- Save As
  Save the data on HOPE3000 UI as a file with a different name.
- Export to HEX File
  Save the data on HOPE3000 as an Intel standard HEX file
- Exit
  Exit HOPE3000 program

Language Menu

Change the language of UI. Now its supports Traditional Chinese/Simplified Chinese/English (as in Fig. 3-3). After selecting, the language of UI is changed immediately.

Fig. 3-3

Setting Menu

Now no any item is on this menu. It’s reserved for further used.

Tool Menu

(Fig. 3-5 shows the commands of the Tool Menu)

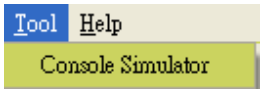


Fig. 3-5

- Console Simulator
  The simulator of the hardware accessory “Console”(Optional) for message display, as in Fig. 3-13. About the detail of this simulator, refer to the section “Console Simulator” of “Other Function” on this chapter.

Help Menu

(Fig. 3-6 shows the commands of the Help Menu)

Fig. 3-6

- About
  Show the version, copyright information of HOPE3000, as in Fig. 3-7. The version number is shown on the rectangle in this figure.

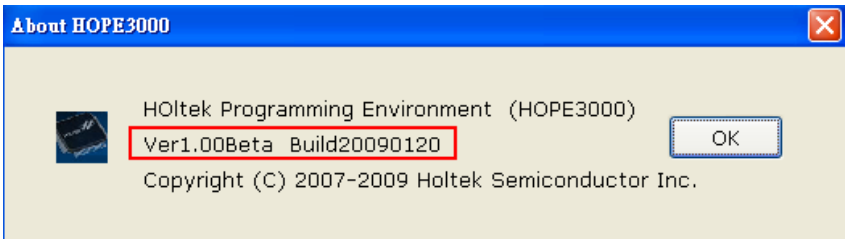


Fig. 3-7

Section ROM Data

Show the content of the programming file. It can at most show the data of the four ROM sections: Code(Program), Option, Data and Voice. In Fig. 3-8, on the rectangle of the left side represents the address of the ROM section, and on that of the right side represents the data of the ROM section. Furthermore, the range "----" in this figure represents the IC locked part.
On the part "ROM section data" (the rectangle on the right side), there are two kinds of colors to identify if the data on HOPE3000 is the same to that in e-Writer. The following explains these two conditions:

- When the data on HOPE3000 is the same to that in e-Writer
  The color on the part "ROM section Data" is blue and the buttons of the programming operations like "BlankCheck" are enabled
  →It means that you can do the programming operations
- When the data on HOPE3000 is different from that in e-Writer

The color on the part “ROM section Data” is red and the buttons of the programming operations like “BlankCheck” are all disabled.

→It means that you can’t do any programming operations until the data on HOPE3000 is the same to that in e-Writer by executing the command “Download”, “Upload” or “Select IC and Process” on “Menu/File”.

Note: You can do programming operations when the data shown on HOPE3000 is the same to that in e-Writer.

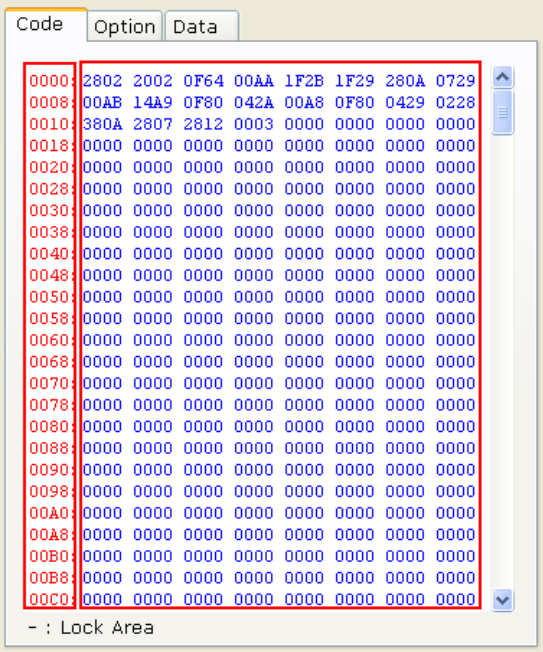


Fig. 3-8

Section Message Box and Other Information

This section is divided into several sections (as in Fig. 3-9) and the following introduces these sections:

- Counter
  Count the successful, failed and total counts for the IC-programming. These three values are stored on Windows Registry and clicking the button “Reset” is to clear all these three values as 0.
- Execution Time
  Show the time cost to do the operations related to e-Writer, like Download, Program. Usually, this information is used to measure programming time.
- F/W Version
  Show F/W version on this place when e-Writer is connected.
- Progress Bar
  Show the progress of the download, upload or programming operations.

- Message Box
  Show the execution result of any operation or the e-Writer status.

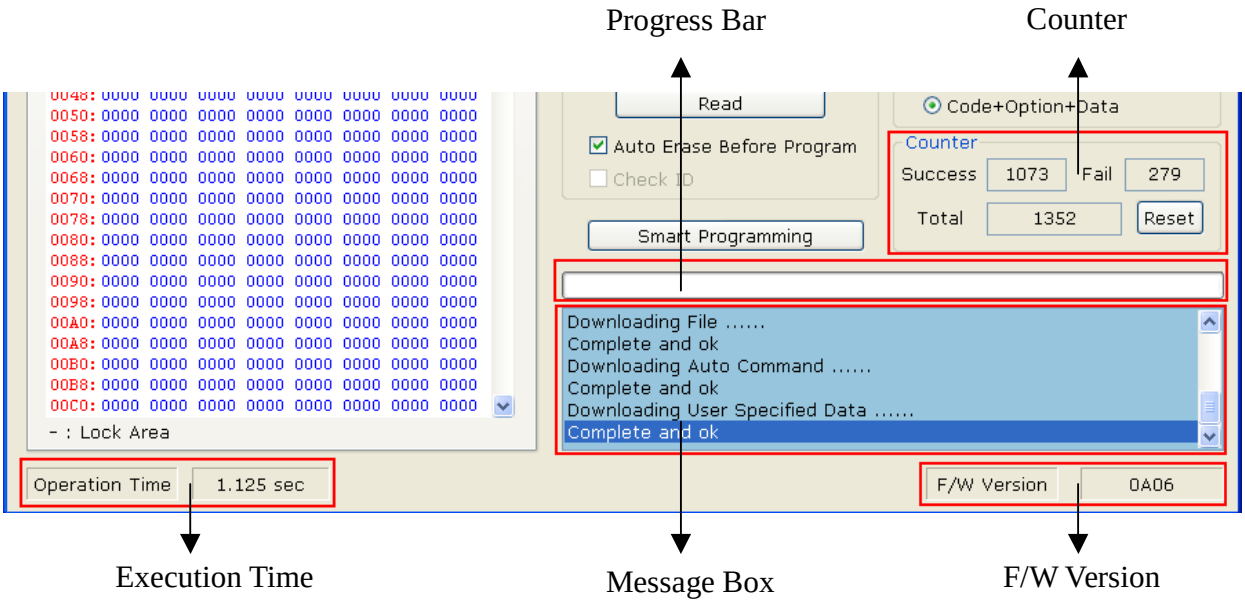


Fig. 3-9

Section IC Information

As in Fig. 3-10, this section is divided into three sections: Driver, IC and Checksum and their introductions are as the following:

- Driver
  Show the driver(See Note) type and version. The driver type is the IC type in the opened file or selected in the command “Menu/File/Select IC and Process”. For example, in Fig. 3-10, the driver type is HT45F0V and driver version is 1.0. In addition, before downloading the programming file to e-Writer, you should check if the driver type is the same to the type of IC to program.

  ※Note: it records the information of IC in driver and each IC type has its own driver. When downloading, the driver and the programming file are been downloaded at the same time.
- IC
  Show the IC type detected on the programming adapter of e-Writer and click the button

"Check" to detect. When doing the programming operations, the IC type on the adapter is shown on this place. In addition to note is that only some IC types support this function (like OTP MCU).

- Checksum
  The checksum of the ROM sections. You can choose three ways to calculate the checksum of the ROM sections:
  "Code" calculates the checksum of the Code section.
  "Code + Option" calculates the checksum of the Code and Option section.
  "Code " Option" calculates the checksum of the Code, Option and Data section.
  Note: this checksum is not the OTP/MTP/PND file checksum.

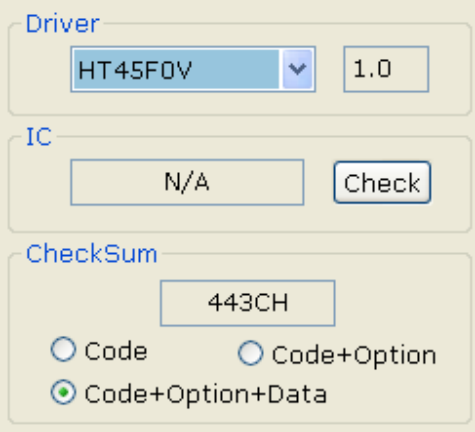


Fig. 3-10

Section Programming Operations and Smart Programming

It includes six basic programming operations (BlankCheck, Program, Verify, Lock IC, Erase and Read), Smart Programming and two programming settings, as in Fig. 3-11. And the following explains the detail of these commands:

- BlankCheck
  Check if the IC on e-Writer is been programmed (namely, check if IC is empty). And the result is displayed in Message Box
- Program
  To do two operations: at first, program the data in e-Writer

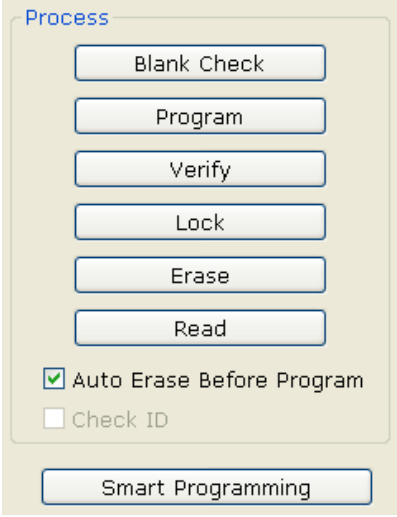


Fig. 3-11

to IC and then check if the data in this programmed IC is the same to that on e-Writer. And the result is displayed in Message Box. In addition, only after downloading the programming file to e-Writer, this button is enabled.

- Verify
  Check if the data in IC is the same to that on e-Writer. And the result is displayed in Message Box. In addition, only after downloading the programming file to e-Writer, this button is enabled.
- Lock IC
  Lock IC to prevent the data in IC from reading. This function is to protect the data in IC. Usually after doing the operation "Program", you would use "Lock IC" to protect the data in IC.
- Erase
  Erase the data in IC to make it as a blank IC. Now only some IC types, like Flash Type MCU, support this operations.
- Read
  Read the data in IC to e-Writer. After this operation, you can execute the command "Menu/File/Upload" to upload this data to HOPE3000 for observing.
  Note: after "Read" is success, because the data on e-Writer is different from that on HOPE3000, you are unable to do the programming operations (At this time the buttons on section "Process" are disabled) until executing the commands "Menu/File/Upload".
- Smart Program
  Start the "Smart Programming" UI. For the detail, please refer to Chapter 4 "Introduction to HOPE3000 – Smart Programming Function".
- Auto Erase Before Program
  Select this setting to do the operation "Erase" before "Program". In addition, only some IC types, like Flash Type MCU, support this setting.
- Auto Erase Voice Before Program
  Select it to do the operation "Erase" Voice ROM before "Program". When the current operated IC type is "Flash Type Voice OTP MCU" (like HT83F, HT95RH series), the text of the previous setting "Auto Erase Before Program" changes to this one because only the Voice ROM can be erased on this IC type.
- Check ID
  Select this setting to check if the IC type on e-Writer is the same to that in the opened programming file (To let you know if the IC on the adapter and the opened file are correct). In addition, only OTP MCU supports this option.

Other Function

"Select IC" Dialog

This dialog popped up after executing the command "Menu/File/Select IC and Process" (Fig. 3-13). It is used to select the demand IC type to operate and the available selection can be either one from the below two sources:

- From Recent Used IC
  Select from the recent used IC types. Clicking the button “Clear” removes the selected IC type from the recent used IC type list (For example in Fig. 3-12, clicking this button is to remove “HT45R0F” from the list) and Clicking “Clear All” clears all types on the list.
- From All IC
  Select from all the supported IC type.

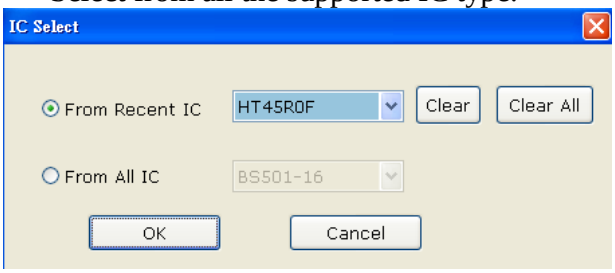


Fig. 3-12

Console Simulator

The window where simulating the hardware of Console (Fig. 3-13). The way to start it is by executing the command “Menu/Tool/Console Simulator”. On the center rectangle of this window simulates the LCD of Console and the messages shown on it are the same as on Console. In addition, the check box “Play” is the voice switch and after checking it, not only displaying the message text, but also playing the voice of that message at the same time

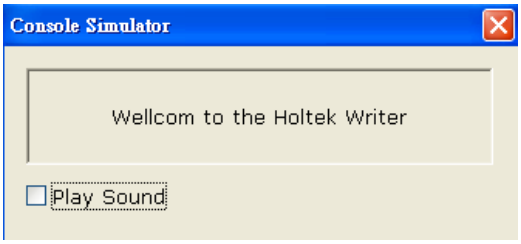


Fig.3-13

Chapter 4

Introduction to HOPE3000 – Smart Programming Function

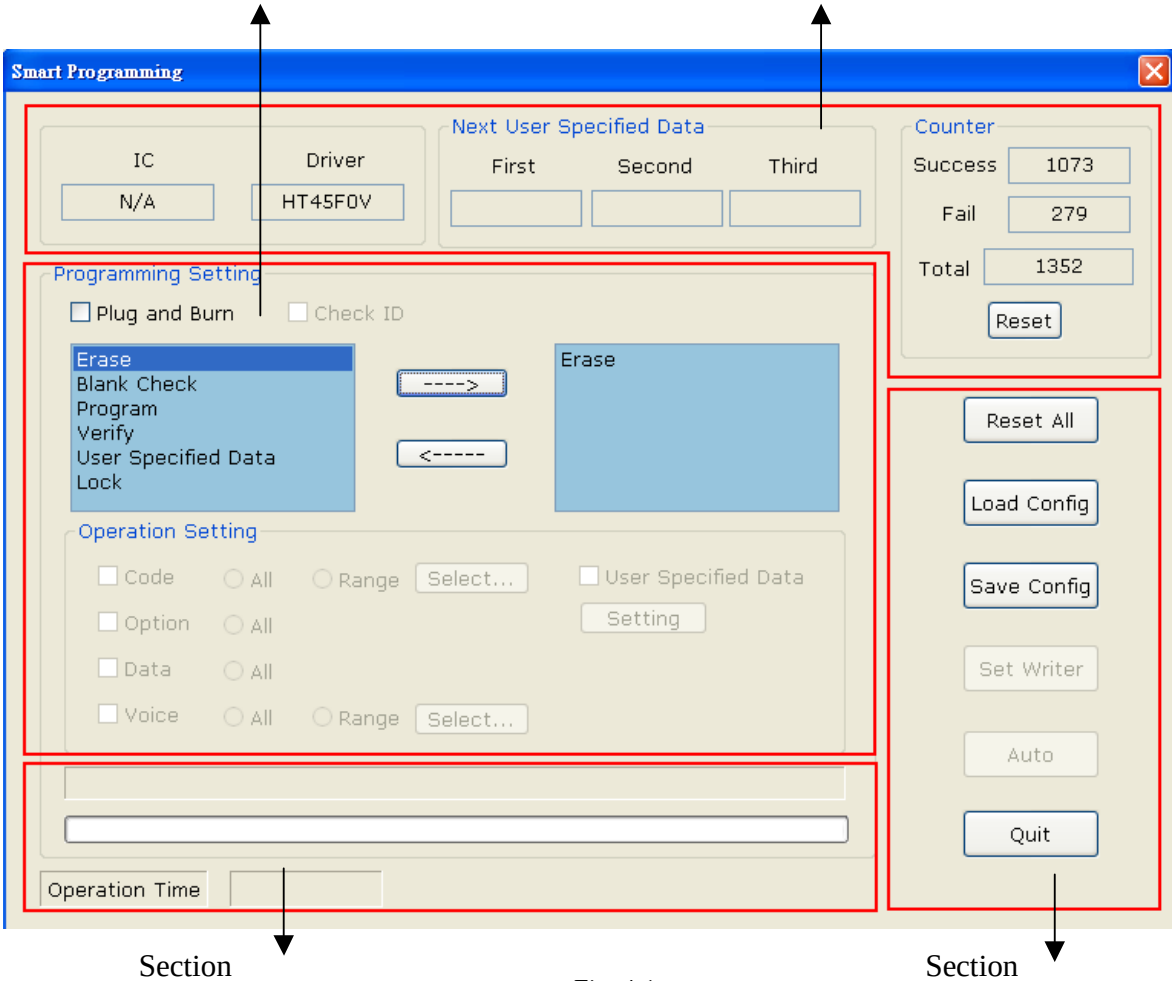
4

Smart Programming is an advanced function. Relative to the basic functions on HOPE3000 Main UI (to do the programming operations for entire IC on the PC side), it can realize the three main functions “Auto Programming”, “Partial Programming” and “Programming User Specified Data”, and you can choose the On-Line Programming (to operate e-Writer on the PC side) or the Off-Line

Section
Programming Setting

Section
IC Information

Programming (to operate e-Writer by only connecting the power adapter to it). Smart Programming UI is divided into four main sections in Fig 4-1 and the following introduces the detail of these sections.



Section
Message and Other Information

Fig. 4-1

Section
Operating commands

Section IC Information

Section IC Information (the rectangle in Fig. 4-2) is divided into the following four items:

- IC
  The same as the field “IC” on HOPE3000 Main UI. It shows the IC type detected on the programming adapter.
- Driver
  The same as the field “Driver” on HOPE3000 Main UI. It is the IC type in the opened programming file or selected in the command “Menu\File\Select IC and Process”.
- Next User Specified Data
  Show the value of the current user specified data to program. It can show three groups at most by the setting on “User Specified Data” Dialog.
- Counter

The same as the field “Counter” on HOPE3000 Main UI. Its shows the successful, failed, and total counts and clicking the button “Reset” is to clear these three values as 0

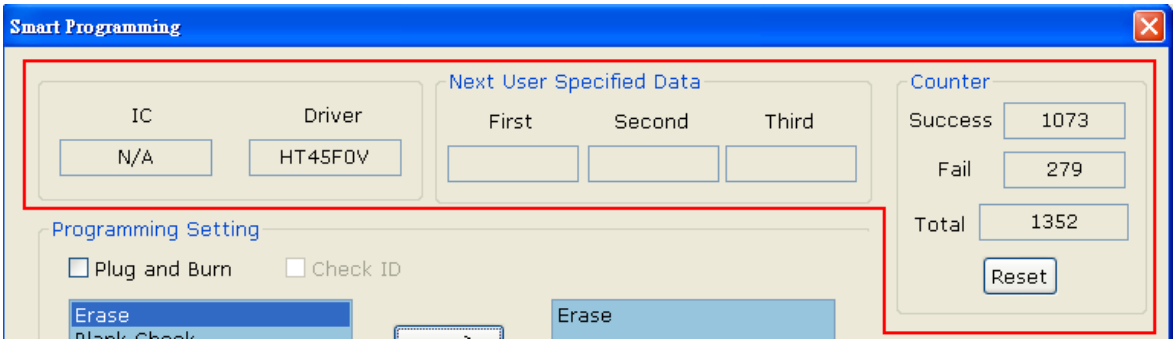


Fig. 4-2

Section Operating Commands

Section Operating Commands (Fig. 4-3) has six commands on it and their details are depicted as following:

- Reset All
  Restore all the settings on Smart Programming UI.
- Load Config
  Load the Smart Programming Configuration file (.SPC).
- Save Config
  Save all the settings on Smart Programming UI as file (.SPC).
- Set Writer
  Download the settings on Smart Programming UI to e-Writer.
- Auto
  Execute the programming operations set on Smart Programming UI.
- Quit
  Quit the Smart Programming UI and return to HOPE3000 Main UI.

Fig. 4-3

Section Programming Settings

Section Programming Settings is the section for setting the functions of Smart Programming. After setting, you should click the button “Set Writer” to download these settings to e-Writer and then these settings are been executed after clicking the button “Auto” (On On-Line mode) or pressing the programming key on e-Writer (On Off-Line mode). This section is divided into three parts (Fig. 4-4) and their details are as the following:

Programming Function Setting

Programming Operation Setting

Programming Operation Detail Setting

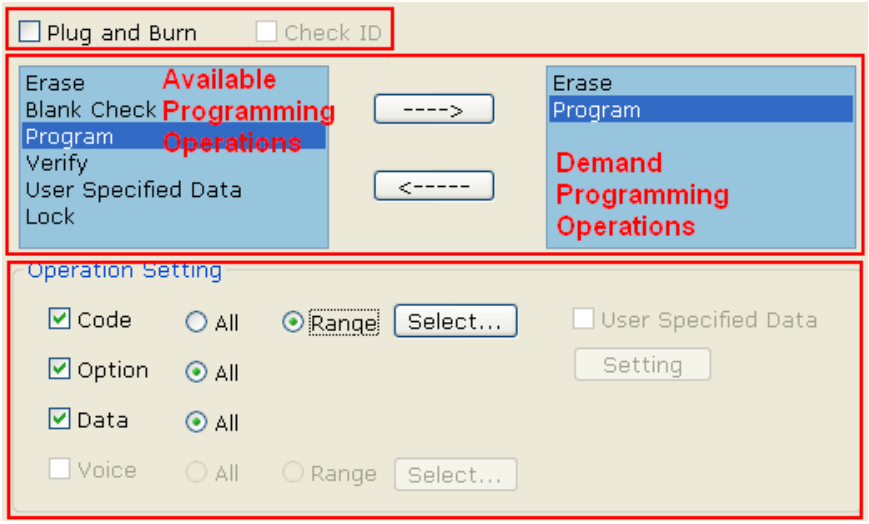


Fig. 4-4

- Programming Function Setting
  This part is used to set some special programming functions and it has the following two functions:
  - "Plug and Burn" — Do the programming operations automatically when IC is ready ((to put IC on the adapter well and plug the bar of the adapter down). This function is only for Off-Line programming
  - "Check ID" — The same as the function "Check ID" on HOPE3000 Main UI. When selecting it, it will check if the IC type on the adapter is correct before any programming operation. Only the IC type of OTP MCU supports this function as well.
- Programming Operation Setting
  This part is used to set the demand programming operations and at most six operations, "Erase", "BlankCheck", "Program", "Verify", "User Specified Data" and "Lock IC" are available (some IC types only supports part of these operations).
  At left side, the "Available Programming Operations" list lists all the supported operations; and at right side, the "Demand Programming Operations" list lists all the operations selected. Clicking the button "----->" is to add the operation selected from the left list to the right list and clicking the button "<------" is to remove the operation selected from the right list.
- Programming Operation Detail Setting
  This part is used to set the detail setting for each programming operation. When selecting any operation from the "Demand Programming Operation" list in Fig. 4-4, the detail setting is appeared in section "Operation Setting" on the bottom of this figure. The following explains each setting:
  - "Code", "Option", "Data" and "Voice" —
    These settings appeared when selecting "Erase", "BlankCheck", "Program", "Verify" and "Lock IC". It's used to set the programming range of the ROM section, Code, Option, Data, and Voice, and only Code and Voice support partial range. After clicking the button "Select", the "Programming Range Select Window" is popped up (Fig. 4-6) and if any ROM setting (like Voice in Fig. 4-4) on UI is disabled, it means that that ROM section is not supported for this IC type.

For the detail of “Programming Range Select Window”, please refer to the section “Programming Range Select Window” on this chapter.

△ “User Specified Data” —
This setting appeared when selecting “User Specified Data”. After clicking the button “Setting”, the “User Specified Data Setting Window” is popped up (as in Fig. 4-9).
For the detail of “User Specified Data Setting Window”, please refer to the section “User Specified Data Setting Window” on this chapter.

Section Message and Other Information

As in Fig. 4-5, this section is divided into three parts:

- Message
  Show the execution result of any operation or the e-Writer status.
- Progress Bar
  Show the progress when setting writer or doing auto-programming.
- Execution Time
  Show the time cost to execute the commands related to e-Writer (like “Set Writer”, “Auto” or others). This information usually is used to measure the programming time.

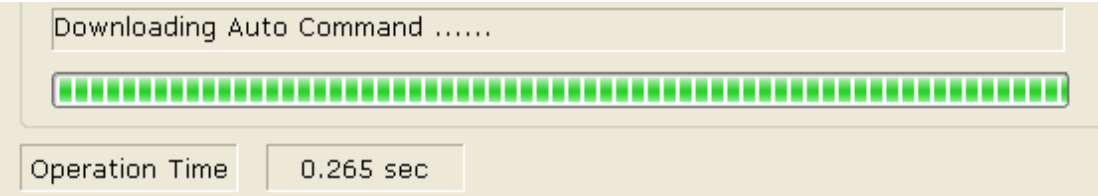


Fig. 4-5

Programming Range Select Window

This window is used to select the programming range and it’s divided into the following two modes by “Select mode”:

(A) List Mode

As in Fig. 4-6, this mode is for the application on the smaller programming range. It is classified as below by interface:

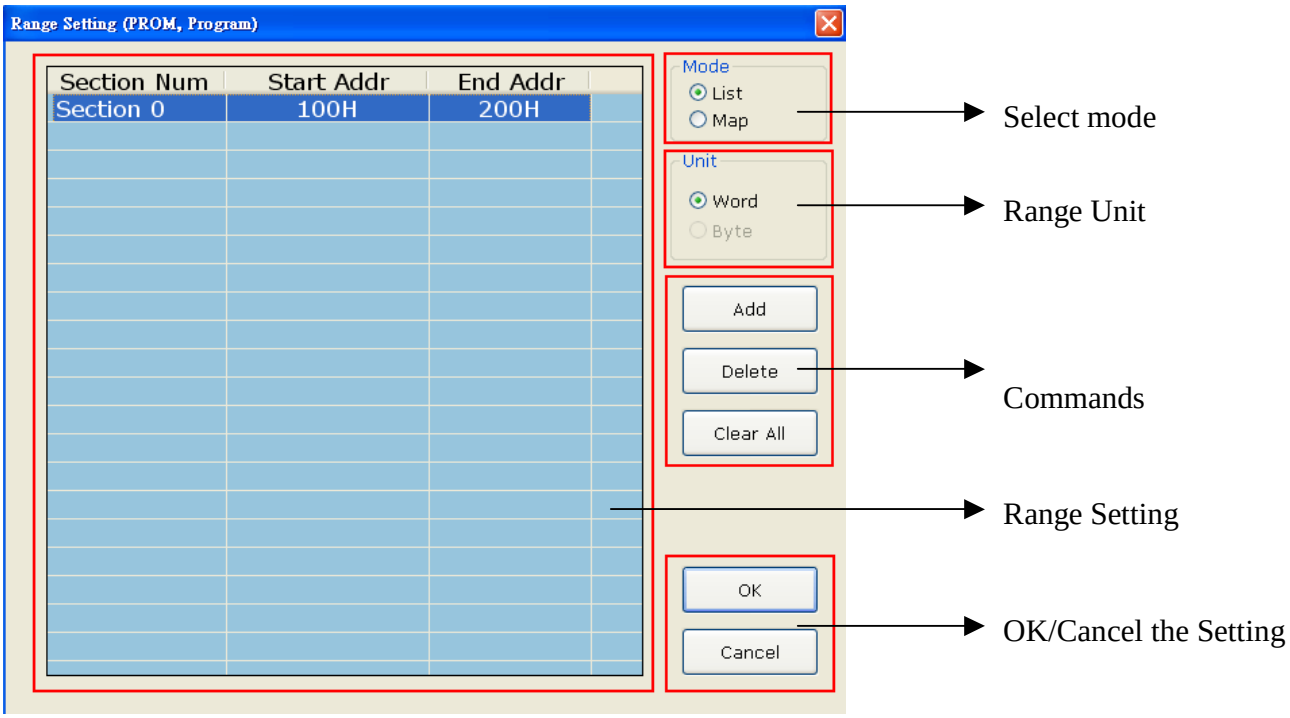


Fig. 4-6

- Range Unit
  The unit of address on "Range Setting". By the characteristic of the ROM section, there are two kinds of units: Word (Program ROM) or Byte (Voice ROM).
- Commands
  "Add" — add a programming section on "Range Setting"
  "Remove" — remove a programming section from "Range Setting"
  "Clear" — clear all the programming sections on "Range Setting"
- Range Setting
  List all the programming sections. Clicking the field "Start Addr" and "End Addr" to edit the start and end address of this section.
- OK/Cancel the Setting
  "OK" — store the specified ranges and then return to Smart Programming UI.
  "Cancel" — cancel the setting this time and then return to Smart Programming UI.

(B) Map Mode

As in Fig. 4-7, this mode is for the application on the larger programming range. It is classified as below by interface (some items the same as on List Mode aren't depicted again):

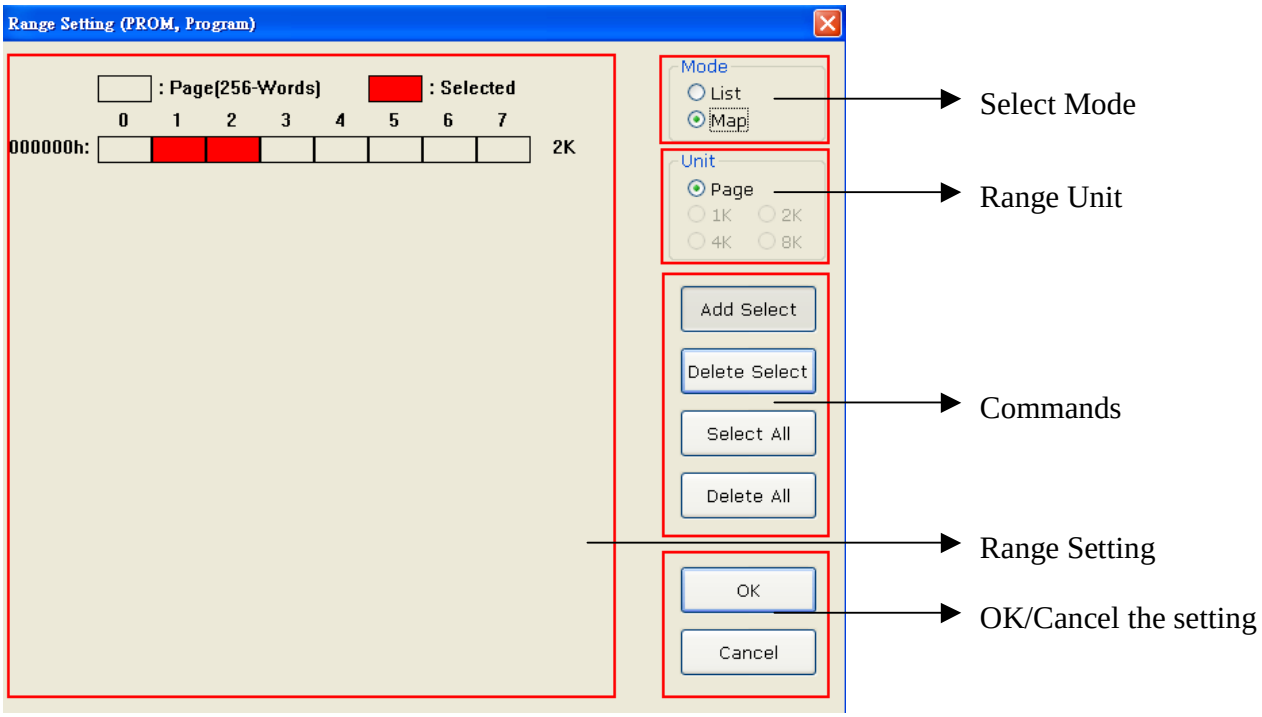


Fig. 4-7

- Range Unit
  The unit of each grid on “Range Setting”. By the characteristic of the ROM section, there are five kinds of units: Page (256 Words) for Program ROM and 1K, 2K, 4K, 8K Bytes for Voice ROM.

  ※When the operation is “Lock IC”, each grid is composed of several pages. As in Fig. 4-8, the red selection represents to select from page 4 to 6 and total amounts are three pages. In addition, there is no “List Mode” for “Lock IC”
- Range Setting
  List all the programming sections. The red section represents the selected programming range.
- Commands
  “Add Select” — After clicking it, add the range selected on “Range Setting” to the programming sections.
  “Delete Select” — After clicking it, remove the range selected on “Range Setting” from the programming sections.
  “Select All” — Select all the programming sections on “Range Setting”.
  “Clear All” — Clear all the programming sections on “Range Setting”.

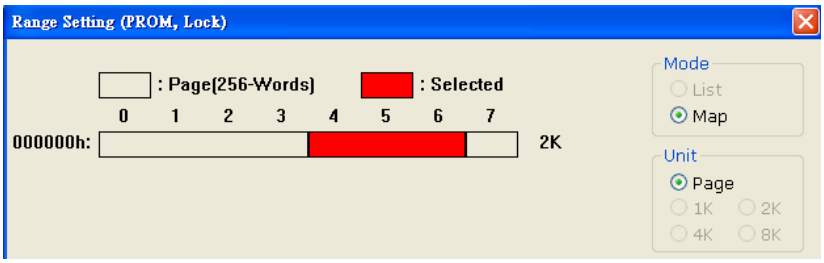


Fig. 4-8

User Specified Data Setting Window

This window is used to set the user specified data. “User Specified Data” is a single record of data to be programmed to the specified address in ROM section and its value is decided by you. This function is usually applied to program serial number or other special data. Now the ROM section it supports to program is Program ROM and at most three groups of the different data can be programmed one time.

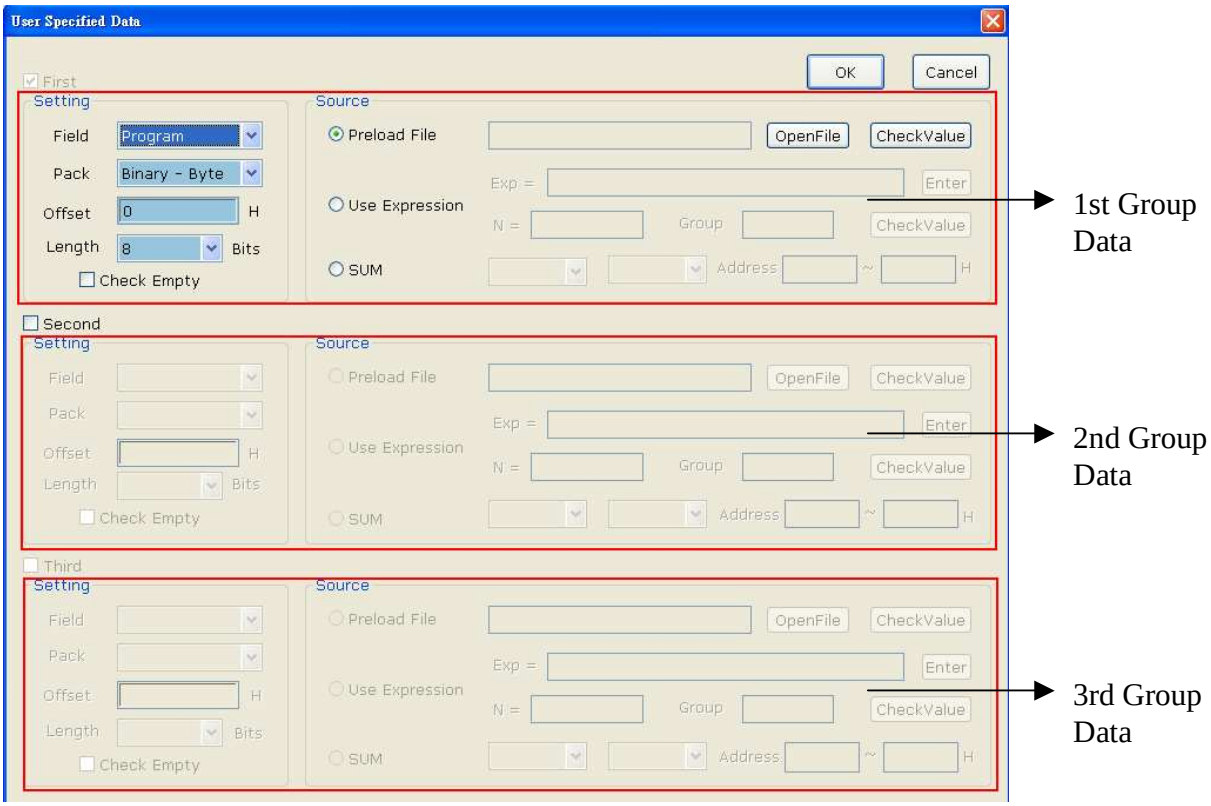


Fig. 4-9

Then the following introduces the definitions and usages for these settings. As in Fig. 4-10, each group of setting is divided into the left and right part. The left part is to set the form, length and address of data in ROM section and the right part is to set the source of data. The details are shown below:

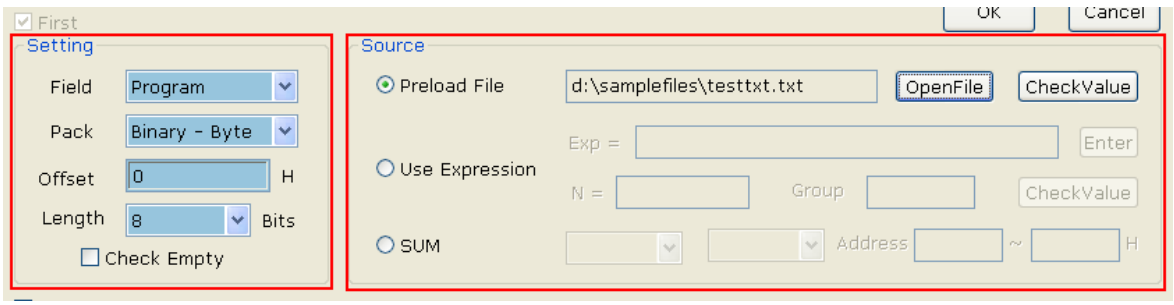


Fig. 4-10

(A) Data Setting (the left part in Fig. 4-1)

- Field
  The ROM section where data is written and now only support Program ROM.

- Pack
  The form of that written data in ROM section. And it has the following four types:
  Binary – Byte → This data is written to each low byte by the form of binary (no encode) from the specified address until reaching the bound of the data length.
  Binary – Word → This data is written to each word by the form of binary from the specified address until reaching the bound of the data length.
  BCD – Byte → This data is written to each low byte by the form of the BCD encoding from the specified address until reaching the bound of the data length.
  BCD – Word → This data is written to each word by the form of the BCD encoding from the specified address until reaching the bound of the data length.
  □ Not support Binary – Word and BCD – Word for the IC type which its ROM bit width is smaller than 16 bits
- Start Address
  The start address of the ROM section where data is written.
- Length
  This length of this data. There are four kinds: 8, 16, 24 and 32 bits and the portion of data larger than this length is abandoned.
  For example, a preloaded data is 12345678H but the specified data length is 24 bits, then only 345678H is valid for this record of data.
- Check Empty
  Check it to check if the programming range is empty firstly before programming this record of data. If it's not empty, an error message is shown when programming.

There are several practical setting example as the following:

EX 1. a record of data is 345678H, its length is 24 bit and it's programmed from the start address 100H on Program ROM by the pack of Binary – Byte, then the actual programming condition is that: 100H → 0078H
101H → 0056H
102H → 0034H

EX 2. a record of data is 12345678H (its BCD code is 305419896H), its length is 32 bit and it's programmed from the start address 200H on Program ROM by the pack of BCD – Word, then actual programming condition is that: 200H → 9896H
201H → 0541H

(B) Data Source (the right part in Fig. 4-10)

□**Note: the following ways "Preload File" and "Use the Custom Expression" have the restriction that total record count of data is about 900 record but another two ways "Use the Expression N+1" and "SUM" have no this restriction.**

- Preload File
  Consider the values in file (include several user-specified records of data) as the user specified data. And the file can be either of the following formats:

□ ".BIN" — Binary file. Each N-Bit number in file is considered as one record of the user specified data (N is the specified data length).
For example, if the data (hexadecimal number) in a file is that:
12 34 56 78 9A BC CD and its data length is 24 bits,
Then the 1st record of data is 563412H,
the 2nd record of data is BC9A78H,
the 3rd record of data is 0000CDH (fill 0 for the insufficient part)

▵ ".TXT" — Text file. The number in each line of the file is considered as one record of the user specified data and it can be binary, decimal or hexadecimal.
For example, if the number in a file is 123456789H
10000000B
55555
and its data length is 16 bits, then
the 1st record of data is 6789H (the exceeding part is been abandoned),
the 2nd record of data is 0080H,
the 3rd record of data is D903H

Usage — as in below Fig. 4-11, click the button "Open" to load the file. In addition, click the button "CheckValue" to check each record of the generated data (as in Fig. 4-15).

Fig. 4-11

➢ Use Expression
The source of the specified data is from the calculation result of an mathematical polynomial (The result value of each calculation is the value of N on the next record). And there are two forms as the following by the difference of the expression:

□ Use the Expression N+1: the data is generated from the expression "N+1". You only need to set the initial value of N to generate a great quantity of records of data. It's suited to the application that needing a great quantity of records of data not from the calculation of the complicated expression.

Usage — In below Fig., fill the initial value of N on the place "N=".

□As in Fig. 4-12, the generated data is 2, 3, 4, 5...etc.

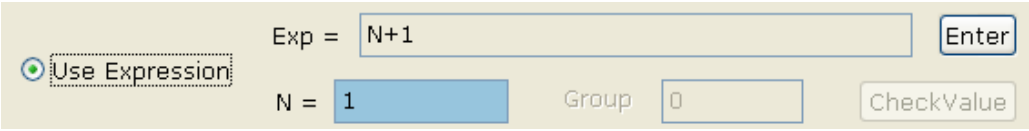


Fig. 4-12

□ Use the Custom Expression: the data is generated from the custom expression. When using it, you need to set the expression, the initial value of N and the number of the generated data. It's suited to the application that needing a small quantity of records of data generated from the calculation of complicated expression.

Usage — In Fig. 4-13, click the button “Enter” to input the expression (“The Expression Input Window” is as in Fig. 4-14). Then input the initial value of N and number of the generated data. In addition, click “CheckValue” to check each record of the generated data, as in Fig. 4-15.

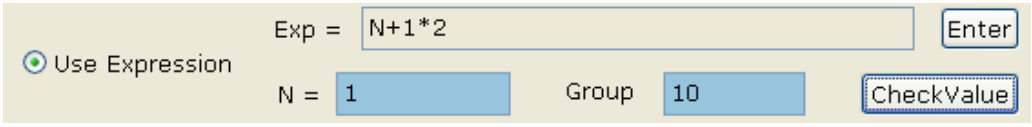


Fig. 4-13

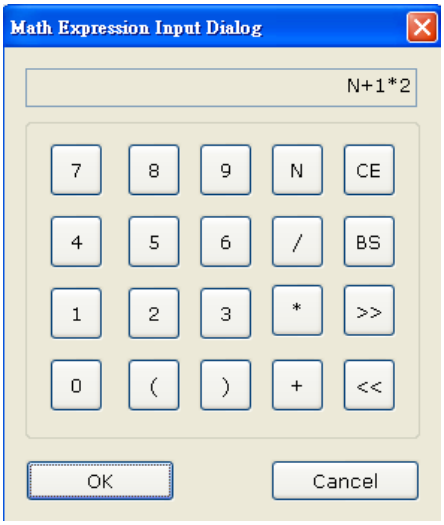


Fig. 4-14

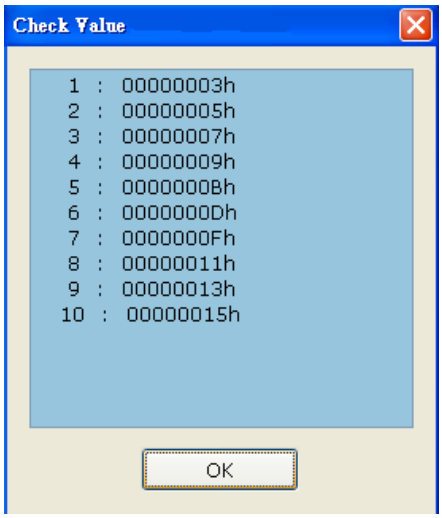


Fig. 4-15

- SUM

Select one address range from Program ROM or Voice ROM and then consider the checksum calculated by the values on this range as one record of data.

Usage — Set the three settings in Fig. 4-16. The following explains these three settings:

- The 1st setting represents the ROM section to calculate and Program ROM (PROM) or Voice ROM (VROM) is available.
- The 2nd setting represents the unit to calculate and the summation way by byte or by word is available. In addition to note is that only some IC type support the way by word.
- The 3rd setting represents the address range to calculate.

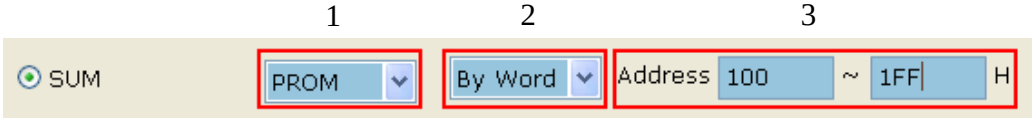


Fig. 4-16

Chapter 5

Introduction to HOPE3000 – DOS Command Mode 5

HOPE3000 – DOS Command Mode is the interface to operate by command, namely, you can type the command on “Command Prompt” under MS Windows to finish programming. For the start way of it, please refer to the Case.7 on Chapter 2 “Quick Start”.

Feather

- DOS-Shell Compatible Command
  The parameter format of all built-in commands is compatible with that of the DOS-Shell commands. You can write a batch file (.BAT) with any combination of the commands.

- All commands and their parameters are case-insensitive

- On-Line Help: add “/?” to the end of each command to get the on-line help
  e.g. C:\>WCMD /? ; get help for all supported commands
  C:\>WCMD -D /? ; get help for the download command

Command List

Command Format:
C:\>WCMD -Command /Parameter
e.g. C:\>WCMD -D /FC:\HT45F0V.MTP /W2

Current available commands and their parameter definitions are listed on the following.

1)【T】obtain the writer number

Syntax：-T [/WWriterNumer]
Parameters：WriterNumer – the specified writer number (1~8); if not specified, default is 1
Remark：1. This command is used to identify the writer number of each writer.
2. This command will turn on all the three LED lights on the writer.
3. When using multiple writers, please identify the number of each writer by this command first; if only one writer, this command is not necessary.
Example：-T ; get the number 1 of writer
-T /W2 ; get the number 2 of writer

2)【D】download a file to writer

Syntax：-D /FFilePathName [/MMCUType] [/WWriterNumber]
Parameters：FilePathName – the downloaded file path name
MCUType – specify the MCU type, only for memory IC
WriterNumer – the specified writer number (1~8); if not specified, default is 1
Example：-D /FC:\HT45F0V.MTP
-D /FC:\HT2201.MEM /MHT2201 /W2

3)【U】upload data from writer to PC and save it as a file

Syntax：-U [/FFilePathName] [/WWriterNumber]
Parameters：FilePathName – specify the file path name to be stored (it's not necessary to specify the file extension name, it would use the file type stored in writer); if not specified, it uses the file name stored in writer
WriterNumer – the specified writer number (1~8); if not specified, default is 1
Example：-U /FC:\UploadFile
-U /W3

4)【P】program IC with data in writer (Program)

Syntax：-P [/PROMType0=StartAddress-EndAddress,ROMType1,...ROMType3]
[/WWriterNumber]
Parameters：ROMType - the ROM section to be written to. It must be "Program", "Option", "Data" or "Voice"
StartAddress – the start address of programming (partial programming)
EndAddress – the end address of programming (partial programming)
WriterNumber – the specified writer number (1~8); if not specified, default is 1

Remark：1. Only “Program” and “Voice” has partial-programming function.
2. If no range is specified, it would be all ROM range.
3. Before using this command, make sure if you have downloaded the programming file to writer.

Example：-P ; program all
-P /PProgram=100h-2FFh,Option ; program partial PROM, all Option ROM
-P /PData,Voice=2000h-3FFFh ; program partial VROM, all Data ROM
-P /PProgram,Voice ; program all PROM, VROM

5)【V】verify IC with data in writer (Verify)

Syntax：-V [/VROMType0=StartAddress-EndAddress,ROMType1,...ROMType3]
[/WWriterNumber]

Parameters：ROMType - the ROM section to be verified. It must be “Program”, “Option”, “Data” or “Voice”
StartAddress – the start address of verifying (partial verifying)
EndAddress – the end address of verifying (partial verifying)
WriterNumber – specified writer number (1~8); if not specified, default is 1

Remark：1. Only “Program” and “Voice" has partial-verifying function.
2. If no range is specified, it would be all ROM range.
3. Before using this command, make sure if you have downloaded the programming file to writer.

Example：-V
-V /VProgram=100h-2FFh,Option
-V /VData,Voice=2000h-3FFFh
-V /VProgram,Voice

6)【B】check if IC is blank (Blank Check)

Syntax：-B [/BROMType0=StartAddress-EndAddress,ROMType1,...ROMType3]
[/WWriterNumber]

Parameters：ROMType - the ROM section to be checked. It must be “Program”, “Option”, “Data” or “Voice”
StartAddress – the start address of checking (partial blank-checking)
EndAddress – the end address of checking (partial blank-checking)
WriterNumber – the specified writer number (1~8); if not specified, default is 1

Remark：1. Only “Program” and “Voice” has partial-blank-checking function.
2. If no range is specified, it would be all ROM range.
3. Before using this command, make sure if you have downloaded the programming file to writer.

Example：-B
-B /BProgram=100h-2FFh,Option
-B /BData,Voice=2000h-3FFFh
-B /BProgram,Voice

7)【E】erase IC (Erase)

Syntax：-E [/EROMType0=StartAddress-EndAddress,ROMType1,ROMType2]

[/WWriterNumber]
Parameters：ROMType - the ROM section to be erased. It must be “Program”, “Option” or “Data”
StartAddress – the start address of erasing (partial erasing)
EndAddress – the end address of erasing (partial erasing)
WriterNumber – the specified writer number (x=1~8); if not specified, default is 1
Remark：1. Only “Program” and “Voice” has partial-erasing function (“Voice” is only for Flash Type Voice OTP MCU).
2. If no range is specified, it would be all ROM range.
3. Before using this command, make sure if you have downloaded the programming file to writer.
Example：-E
-E /EProgram=100h-2FFh,Option
-E /EData
-E /EProgram

8)【L】lock IC (Lock IC)

Syntax：-L [/LROMType0=StartAddress-EndAddress,ROMType1] [/WWriterNumber]
Parameters：ROMType - the ROM section to be locked. It must be “Program” or “Data”
StartAddress – the start address of locking (partial lock)
EndAddress – the end address of locking (partial lock)
WriterNumber – the specified writer number (1~8); if not specified, default is 1
Remark：1. Only “Program” has partial lock function
2. If no range is specified, it would be all ROM range
3. Before using this command, make sure if you have downloaded the programming file to writer.
Example：-L
-L /LProgram=0h-3h,Data
-L /LProgram

9)【R】read data in IC to writer (Read)

Syntax：-R [/WWriterNumber]
Parameter：WriterNumber – the specified writer number (1~8); if not specified, default is 1
Remark：1. No partial read.
2. Before using this command, make sure if you have downloaded the programming file to writer.
Example：-R

10)【S】set setting for Auto-Programming

Syntax：-S [/EROMType0=StartAddress-EndAddress,ROMType1,ROMType2] // erase
[/BROMType0=StartAddress-EndAddress,ROMType1,...ROMType3] // blank
[/PROMType0=StartAddress-EndAddress,ROMType1,...ROMType3] // program
[/VROMType0=StartAddress-EndAddress,ROMType1,...ROMType3] // verify
[/LROMType0=StartAddress-EndAddress,ROMType1] // lock
[/WWriterNumber]

Parameter：Refer to the command “E”, “B”, “P”, “V”, “L” for their command definitions

Remark：1. This command stores user’s setting in writer. Then user can run these settings by the “A” command

2. Blank, program and verify can only use the same range and user should set their range one time (see example)

3. Before using this command, make sure if you have downloaded the programming file to writer.

Example：-S /EProgram=100h-2FFh /B/P/VProgram=100h-2FFh ; erase/blank/program/verify
; 100h~2FFh of PROM

-S /B/P/VOption,Data /LData ; blank/program/verify Option, Data ROM,
; and lock Data ROM

-S ; set all operations, all ROMs

11)【A】run Auto-Programming

Syntax：-A [/WWriterNumber]

Parameters：WriterNumber – the specified writer number (1~8); if not specified, default is 1

Remark：Before using this command, user should set setting firstly (by the “S” command)

Example：-A

12)【W】write IC directly with a specified value

Syntax：-W /PROMType=StartAddress:Value [/WWriterNumber]

Parameters：ROMType – the ROM section to be written to. It must be “Program” or “Data”
StartAddress – the start address to write
Value – the hexadecimal value to write (at most 16-words long)
WriterNumber – the specified writer number (1~8); if not specified, default is 1

Remark：Before using this command, make sure if you have downloaded the programming file to writer.

Example：-W /PProgram=100h:01234567h
-W /PData=02h:24959h /W2

3. Examples

- Example 1. burn IC in one of writers:

```
WCMD   -T   /W1
WCMD   -T   /W2
WCMD   -D   /FC:\HT45F0V.MTP   /W2
WCMD   -E   /W2
WCMD   -B   /W2
WCMD   -P   /PProgram=100h-200h,Option,Data   /W2
WCMD   -V   /VProgram=100h-200h,Optiion,Data   /W2
WCMD   -W   /PProgram=201h:334455h   /W2
WCMD   -L   /W2
```

- Example 2. read data in IC to PC and save as an file:

```
WCMD   -R
WCMD   -U   /FC:\ReadData
```

Note: the data on e-Writer must be the same of IC type.

- Example 3. auto programming:

```
WCMD   -D   /FC:\HT46F46E.MTP
WCMD   -S   /EProgram=0h-2FFh,option,data   /B/P/VProgram=0h-2FFh,option,data
            /LProgram=0h-2FFh,data
WCMD   -A
```

Appendix A

System and Error Message A

System Error Message

- ERR_0001: No language file found !
  →The HOPE3000 language file is missed, please reinstall HOPE3000.

- ERR_0002: Error occurred when loading language file !
  →Cannot load the HOPE3000 language file, please reboot PC and then run HOPE3000 again. If this error is occurred again, please reinstall HOPE3000.

- ERR_0003: Failed to find
  →Cannot find the specified file, please check if this file is existed, specified path is correct or it is used by another program.

- ERR_0004: Invalid file format or failed to find driver !
  →The format of the opened file is invalid or the IC type in file is not supported. Please check if the programming file is generated from HT-IDE3000 or other HOLTEK official software and the version of HOPE3000 supports that IC type (check it by referring to the document "Supported IC List" on directory "Manual" under the root directory of HOPE3000).

- ERR_0005: Failed to load the data in the writer ! Please re-download file.
  →It's unable to upload because the data in e-Writer is damaged or of other reason. Please download the programming file again.

- ERR_0006: Find no EFORMATtoDDF.DLL !
  →System file is missed, please reinstall HOPE3000 program.

- ERR_0007: Load EFORMATtoDDF.DLL failed !
  →Cannot load the HOPE3000 system file. Please reboot PC and execute HOPE3000 again; If this error is occurred again, please reinstall HOPE3000.

- ERR_0008: Find no DLLFORFUN.DLL !
  →The system file is missed, please reinstall HOPE3000.

- ERR_0009: Load DLLFORFUN.DLL failed !
  →Cannot load the HOPE3000 system file. Please reboot PC and execute HOPE3000 again; If this error is occurred again, please reinstall HOPE3000.

- ERR_0010: Invalid SPC file format !
  →The format of the opened Smart Configuration Setting File (.SPC) is incorrect, please make sure if this file is generated by HOPE3000.

- ERR_0011: This SPC file version cannot be used in this program version !
  → The version of the opened Smart Programming Configuration File (.SPC) isn't supported at this version of HOPE3000. Please use the proper version of HOPE3000 to open this file or set the Smart Programming Setting again.

- ERR_0012: Driver type mismatched ! Driver type in File is
  → The driver type on the opened Smart Programming Configuration File (.SPC) is different from the current used driver type, please make sure if this .SPC file is correct.

- ERR_0024: Save file failed !
  →Save file failed. Please reboot PC and execute HOPE3000 again.

- ERR_0025: Download language file to console failed !
  →Download the language file to Console failed. Please check if Console is connected to e-Writer firstly, then reboot PC and execute HOPE3000 again; if this error is occurred again, please reinstall HOPE3000.

- ERR_0026: Download driver failed !
  →Download the driver failed. Please reboot PC and execute HOPE3000 again; if this error is occurred again, please reinstall HOPE3000.

- ERR_0027: The data in the writer is invalid ! Please re-download file.
  →It's unable to upload because the data in e-Writer is damaged or of other reason. Please download the programming file again.

- ERR_0028: The specified IC is invalid !
  →HOPE3000 can't identify the specified IC type. Please reboot PC and execute HOPE3000 again; if this error is occurred again, please reinstall HOPE3000.

- ERR_0029: The driver type in the writer is not supported !
  →This version of HOPE3000 doesn't support this driver type (IC type) uploaded from e-Writer, please use the version of HOPE3000 that supports that driver type to upload again.

- ERR_0030: Find or load driver failed !
  →Error occurred when loading the driver. Please reboot PC and execute HOPE3000 again; if this error is occurred again, please reinstall HOPE3000.

- ERR_0031: ROM data checksum error !
  →It's unable to upload because the data in e-Writer is damaged or of other reason. Please download the programming file again.

- ERR_0032: Obtain next user specified data failed !

→ Cannot obtain the next user specified data. Please reboot PC and then execute HOPE3000 again.

- ERR_0034: Not supported F/W version !
  → This version of HOPE3000 cannot support this F/W version of e-Writer. Please use the proper version of HOPE3000 that support this F/W version.

e-Writer Error Message

Most errors occurred on e-Writer result from the incorrect operation over hardware. Please notice below notes firstly:

- If e-Writer is connected well (Connect to PC on On-Line mode or to power adapter on Off-Line mode)
- If the type of the programming adapter is correct.
- If the IC on the programming adapter is put well, the bar is pulled down and the IC type is correct.
- The 4P Jumper (4P DIP Switch) on the back of e-Writer is set correctly. (Please referring to the table 1-1o on chapter 1 for detail).
- Try more IC to check if the problem is still occurred.
- If any problem, please reboot PC, power on the e-Writer and then try it again.

The following is the e-Writer error messages and their explanations:

- Chip ID is Mismatched
  →the type of IC put on e-Writer is different from that on the opened file, please make sure if the put IC is correct.

- Chip is not Blank
  →IC has programmed.

- Program Error
  →Error occurs when programming.

- Verify Error
  →The data in IC is different from the data on e-Writer.

- Lock IC Error
  →Error occurs when locking IC.

- Read Error
  →Error occurs when reading IC.

- Flash Rom Format Error
  →Examine the programming data failed when e-Writer power on. Please download the programming data again.

- No Auto Operation is set
  →No any auto programming operation is set so it cannot do the Off-Line programming. If you don't wish to do the Off-Line programming, please ignore this message.

- Erase Error
  →Error occurs when erasing IC

- Download to Writer Error
  →Error occurs when downloading the programming file from PC to e-Writer.

- Upload to PC Error
  →Error occurs when uploading the programming file from e-Writer to PC.

- User Specified Data Exceeded
  →The user specified data exceeds. Please set the setting of the user specified data again.

- Program Error (RC Option)
  →The RC Option error occurs when programming.

- Writer Flash Timeout
  →The flash in e-Writer is not responded when downloading. Please download the data again; If this problem is occurred again, please contact with your agent or Holtek for further help.

- Writer F/W is too old
  →The F/W version of e-Writer is too old to use with this version of HOPE3000. Please contact with your agent or Holtek for updating F/W.

- Chip is Locked
  →IC is locked. No any other programming operation can be done except the operation "Erase".

- Test Flash Error
  →It's the e-Writer hardware error occurred when downloading. Please download the data again; if this problem is occurred again, please contact with your agent or Holtek for further help.

- The address where user specified data is about to be written to in IC is not empty
  →Please check if the IC is empty or the setting of the user specified data is correct.

- Match Pattern Error
  →Error occurs when checking the Match Pattern of IC. Please make sure if the IC is correct.

- Data Checksum Error
  →Check data error when uploading or downloading. Please download the data again.

- Hardware(Flash) Error
  →Examine the hardware of e-Writer failed when power on. Please contact with your agent or Holtek for further help.

- Hardware (Power) Error
  →It's the hardware error occurred when programming. Check if the IC and the programming adapter is correct and put well; if this problem is occurred again, contact your agent or

Holtek for further help.

- Power Error! Please Re-power on the Writer
  →Some error occurs on the power of e-Writer, please power on the e-Writer then try it again

- Timeout
  →e-Writer is timeout, please power on the e-Writer again.

- Writer is Busy
  →e-Writer is busy, please power on the e-Writer again.

Appendix B

e-Writer LED Lights and States

B

The e-Writer supplies three LED lights to represent the result of the programming by the status of LED light.

The status of LED light is：

ON: LED is turned on
OFF: LED is turned off
Fast Flash: LED flashes for each 0.25 second
Slow Flash: LED flashes for each 0.5 second

Below table B-1 lists the definitions for the status of each LED light.

Green LED (OK)	Yellow LED (Ready/Busy)	Red LED (Fail)	Definition
ON	Slow Flash	ON	Check the power when writer is power on
Slow Flash	Slow Flash	ON	The power of writer is damaged
OFF	Slow Flash	OFF	Check the power of e-Writer OK
OFF	Slow Flash	ON	The Flash in writer is damaged
OFF	Fast Flash	OFF	The programming operation is executing (Busy)
Slow Flash	OFF	OFF	Operation OK or writer is standby
OFF	OFF	Slow Flash	Operation Fail
Fast Flash	Fast Flash	Fast Flash	These lights are for identifying the writer number when multiple writers are used
Fast Flash	OFF	Fast Flash	User specified data exceeds

Table B-1